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An Address

[ABRIDGED]

ON

IDEALISM IN PUBLIC HEALTH.

Being the Presidential Address delivered before the Annual Meeting of the Society of Medical Officers of Health on Oct. 17th, 1924,

BY ROBERT A. LYSTER, M.D., CH.B., B.SC., D.P.H. BIRM.,

COUNTY MEDICAL OFFICER FOR HAMPSHIRE; LECTURER IN STATE MEDICINE, ST. BARTHOLOMEW'S HOSPITAL, LONDON.

A RESPECTED member of the Council, and a former President of this Society, has frequently reminded us that once upon a time there was an attempt made by the Society to draft and issue a leaflet describing the proper way to disinfect a room, but that the attempt had to be abandoned because of the divergent views that members were found to hold. Of course, this particular attempt may have been made at a specially difficult time, when views upon the subject in question were undergoing considerable change, but the incident serves to illustrate the fact that upon methods of detail, and minutiæ of administration, we can quite healthily and properly differ until experience indicates the true solution. At the same time, there ought to be little or no difficulty in setting up standards or ideals upon which we can all agree, even while we may be pursuing different paths towards them, in the hopes of attainment. If the ideal is established and kept in view, then each and everyone will readily abandon his own particular path if, and when, he finds that it is not leading towards the desired goal.

Because the establishment of definite ideals by this Society is so clearly desirable I decided to devote my address to-day to this subject, and to try to indicate briefly the various subjects which should be crowned with ideals for our attainment.

Most people will agree that, during recent years, there has been a definite revival of idealism. Hardly a day passes in which we do not read of some form or another of idealism, constituting, as it does, the chief influence at work in almost every sphere of human activity against the purely materialistic attitude of life.

IDEALISM OR CANT.

In establishing and maintaining ideals we must be careful to separate them entirely from various cants or obsessions which are so ready to obstruct progress. One of the worst forms of cant posing as an ideal is the claim, usually made by men of assured position and substantial income, that the best kind of professional man cares little or nothing about the money he makes by the exercise of his profession. This belief is based upon the well-known fact that a professional man such as a doctor is often so enthusiastic about his work that he will do it supremely well, whether he is to be paid handsomely for it or not. In other words, he simply cannot do work with the sole idea of making money by it, and is self-compelled to do his best apart altogether from the subject of remuneration. It is not that he does not want money, but that he cannot allow himself to do his work badly. On the other hand, he is usually just as keen as any tradesman in selling his wares at the highest prices, and has at last realised that professional combination and collective bargaining constitute the only method whereby he can command a fair deal. For its own protection the methods and practices at present denoted by the term "Trade Unionism" must sooner or later be adopted by every profession. During the course of my remarks I shall have more to say about canting catch-phrases masquerading as ideals. The alleged "undermining of parental responsibility" by providing treatment for a weakly child is one of these masqueraders, and among others may be mentioned "the maintenance of the great voluntary principle" which is used as an excuse for handing over large sums of public money without adequate control. Similarly, the obstruction offered to great preventive measures in the alleged "interests of morality" by groups of persons who appear to be the victims of a form of sexual obsession is by no means an uncommon hindrance.

I propose to discuss the subject of idealism in public health under four chief headings—namely: (1) Professional: (*a*) General, (*b*) the P.H. branch. (2) Service ideals. (3) Ideals for our Society. (4) Personal ideals. I am well aware of the fact that these four groups are not at all distinct, being, in fact, inextricably interlaced, but the classification may give some coherence to the discussion of a subject that offers many temptations for digression.

PROFESSIONAL IDEALS.

A. *Training.*

Public health having come into its own to some extent and being recognised generally as a subject of outstanding importance, it is not unreasonable to suggest that the subject of preventive medicine should occupy an adequate proportion of the time of the medical student in training. The General Medical Council said, a few years ago, "That throughout the whole period of study the attention of the students should be directed by his teachers to the importance of the preventive aspect of medicine." One wonders what effect this pious expression of opinion, without the slightest backing in the way of regulations, and without any suggestion on the part of the Medical Council as to how this desirable condition should be brought about, has influenced the courses of instruction in the medical schools. After many years' experience as a member of the teaching staff of the medical schools, and as an examiner, I venture to say that expression of opinion has not up to the present had appreciable effect, and that it is not likely to have much so long as the medical schools continue to be, as they probably always will be, governed almost entirely by clinicians. Clinicians, as a general rule, will rarely be sufficiently interested in prevention to undertake any real teaching of it. In a few special cases clinicians have distinguished themselves by their interest and enthusiasm in prevention, but they are the exception and not the rule. Men who have for years devoted the whole of their attention to the diagnosis and treatment of disease are not likely to take up a fresh hobby and to become enthusiasts in prevention. By the time they become teachers in medical schools their interests have become established, and although they may make exceptionally able teachers in diagnosis and treatment, yet they are not likely to arouse in the average student any interest or enthusiasm for prevention.

If the prevention of disease and an increase in the amount of attention given to the public health is as desirable as seems to be generally admitted, then surely it would be worth while to carry out an experiment in some medical school, and to try to establish there a bias in favour of prevention. At the present time the average medical student leaves his school a fully qualified medical practitioner without any real knowledge of, and without any inclination towards, the study of prevention. This is entirely wrong, and must be altered if we are to make such advances in public health as we all desire to see brought about.

B. *Pay.*

The general question of professional remuneration is undoubtedly a matter which can and should be guarded and controlled by the profession as a whole, and it is gratifying to be able to record that substantial advances have been made recently in the organisation of the profession for mutual defence. Still more satisfactory is the fact that there has been

on the part of the profession generally a gradually increasing realisation that the general subject of professional remuneration is inseparably bound up with the subject of the rate of pay of the public health service. Repeated warnings on this subject some time ago received scant attention, but the idea was driven home recently in an unmistakable fashion when the representatives of the medical profession, during the negotiations with the Ministry of Health concerning the subject of panel practitioners' pay, were confronted with a powerful argument in favour of gross underpayment in the form of a reference to the miserably inadequate salaries for which local authorities have during the past few years been able to secure whole-time medical officers with the consent of the Ministry. After this object-lesson there should be no further difficulty in securing the whole-hearted support of the profession in the reasonable demands now being made by the public health service for an improvement in the scale of remuneration. If we can, in connexion with this subject, bring about a general acceptance of the principle that underpayment of any branch of the medical profession constitutes not merely a danger to the whole profession, but also a danger to the public, then there should be no further difficulty in this matter. Underpayment of the public health service means a dissatisfied service, which is as much a public danger as a neglected epidemic or a hidden plague. It also results in the entrance into the service of men who are incapable of succeeding elsewhere.

The salaries scale drawn up by this Society with the British Medical Association will do a great deal in establishing the ideal of equal pay for equal work. Dr. Barlow, in his presidential address last year, called attention to the glaring anomalies which exist in various parts of the country with regard to remuneration, and very reasonably suggested that we did not deserve the title of a "public health service" until we had remedied matters. There is every reason to believe that our salaries crusade at the present time has made a substantial commencement on those lines, but the system of promotion in the public health service can never be satisfactory unless, and until, a scheme of national medical service is created.

PUBLIC HEALTH SERVICE IDEALS.

A. *Training.*

A matter which is immediately the province of the public health service and this Society is the special post-graduate training for the Diploma in Public Health, and the examinations to which such training leads. In the past the public health service, as represented by the Society, has had an inadequate voice in the determination of the courses of training and the kind of examination for the specialist in public health. Few will be able to contend that such subjects are a matter for a *General* Medical Council, or any small body of men, however able they may be in various other branches of medicine and surgery, who have had little experience, and in many instances no training in public health matters. The time has come when the public health service must insist upon taking a hand in the matters relating to the entrants into its specialty.

There are too many portals of entrance to the public health service, and too many examining bodies granting the Diploma in Public Health. One of the ideals to be established by the service and fought for by this Society should be a reduction in the number of qualifying bodies with a view eventually to establishing one portal. It is true that the new regulations in connexion with the Diploma in Public Health recently issued by the General Medical Council may result in a diminution in the number of bodies offering courses of training for this examination, and possibly in a decrease in the number of examining bodies, but it is the opinion of many experienced members of the public health service that the whole subject needs entire revision.

B. *Conditions of Work.*

1. *Lay Control.*—Perhaps the greatest of all the causes of comparative failure on the part of certain medical officers is the fact that their conditions of work are unsatisfactory. It should be laid down as an important ideal that the public health department must control all the medical work of the local authority. The medical officer of health should be the real as well as the nominal head of that department, and he should not be subjected to interference or supervision on the part of any other officer and should deal only and directly with the local authority and its committees.

2. *Security of Tenure.*—This has long been and still remains one of the ideals of the public health service. Great were the rejoicings when it was proclaimed that security of tenure had been obtained at long last. A later examination of the position, however, showed that what was called security of tenure meant merely that the appointment could be terminated only with the consent of the Ministry of Health, who in its turn proved to be ready in certain cases to agree to reductions of salary without regarding such changes as a violation of the principle of security. The present position is that we have no security at all, as a security of office without security of salary is merely a farce.

3. *Superannuation.*—This is an ideal partially attained. In some areas a fairly satisfactory scheme of superannuation is in force, but there are two improvements of the position which we must maintain as ideals. Those are: (*a*) The adoption of the Superannuation Act should be compulsory all over the country. (*b*) We must insist upon special concessions for medical officers of health, since no local government officer requires by law anything like such a long period of training and apprenticeship as is required from the medical officer of health.

4. *A Specialist Service.*—Our expectations of a continuous improvement in the personnel of the public health service by the gradual replacement of the untrained medical officer of health by the specialist officer have not been realised owing to the weakness of the Ministry of Health in granting their approval to the appointment of men without the D.P.H. qualification. The Order itself needs revision, but the Society should press for its rigid administration in the meantime.

5. *Research Work.*—Great possibilities for research work surround every medical officer of health and every member of his staff, and one of our ideals should be that this vast field for research should be no longer neglected. The average medical officer of health is so overworked as to have no time to give to research; opportunities for research should be demanded by the service.

Dr. Robertson, in his presidential address, 1916, expressed the view that a small committee should be appointed to suggest subjects into which research is urgently needed, and perhaps also to suggest the general lines along which this should be carried on. I should like to repeat this suggestion. The allocation of public funds for the purpose of research was a brilliant idea on the part of Mr. Lloyd George, and it raised hopes in all of us that some organised effort was about to be undertaken. Unfortunately, our expectations have not been realised, and so far as the public health service is concerned, the establishment of the Medical Research Council has been a great disappointment. That body appears to have no sympathy with, and no desire to coöperate with, the public health service, and such attitude is to the detriment of the public health. The present policy of concentrating essentially upon purely laboratory investigations may lead to success, but I am personally convinced that general investigations in coöperation with medical officers of health would lead much more rapidly to the solution of many of our difficulties. Bacteriology has undoubtedly secured many brilliant successes, but it is matter of common know-

ledge and regret that it has apparently failed up to the present to help us to the extent we anticipated with regard to many of our common infectious diseases.

Cancer research appears to be fascinated by the cancerous processes and the reactions of the healthy tissues to such processes. It is concerned largely with the surgical aspects of the subject, together with purely laboratory and microscopical investigations. A study of the recently published statistical inquiry of Dr. M. Hindhede seems to indicate that at the present stage we might learn more from general conditions than from purely laboratory investigations.

6. *Propaganda.*—We should allow no limit to be set to the sphere of the health officer in this regard. There is no doubt in my mind that the public health service is the proper centre for organising and carrying out schemes of public propaganda, and that the central body in control should be this Society. No other body possesses the necessary experience and scientific knowledge without which propaganda work may at any time become a great and serious danger, and even a scandal. Small wonder that Dr. Barlow, in his presidential address last year, expressed amazement that outside bodies are being seriously suggested by medical men as the proper organisers of propaganda work in connexion with public health.

C. *Ideals of Local Government.*

1. *Unification.*—Unification of the health service is another ideal. The Ministry of Health Act, establishing the Ministry, seemed on paper to have secured central unification to a considerable extent, but experience has shown that our sanguine expectations in this direction have not been justified. The separation of the medical work of the Board of Education from the Ministry of Health is just as complete as ever, and any alleged unification in that direction is merely make-believe. It has long been an established ideal of this Society that practical unification in this direction is urgently necessary, and I have no doubt that during the coming session the prosecution of this campaign will be continued.

Local unification of medical services is still a pressing need. All public medical work should be combined in one department under one head, and as far as possible controlled directly through one committee of the local authority. Perhaps the most important unification, very many years overdue, is the absorption by the public health authority of the medical work under the Poor-law. For many years the Poor-law has hampered and hindered public health work, both central and local, to an extent which is by no means fully appreciated by the public.

2. *Areas for Local Government.*—Medical officers of health, as local administrators, have obtained valuable experience in local government, and we should be in a position to advise the public as to the alterations that are desirable in the structure of local government.

The vital problems of local government structure have remained virtually untouched for 30 years in country districts, and for more than 40 years in the towns. Governing bodies have remained unaltered while the work of the local authorities has developed almost beyond recognition, and during the same time various and technical changes have rendered many of the old areas obsolete. The time is overdue for a vigorous attempt to fit local government organisation to the new opinions and changed conditions of to-day.

Any Government which attempts a thorough reform of local government is certain to arouse widespread opposition from vested interests; all political parties admit the urgent need for reform and yet all are afraid to tackle it. Pending the reorganisation of local government areas very great reforms could be brought about by the simplification and cheapening of the means of obtaining fresh powers. Private Bill legislation is ridiculously slow and costly and can only be undertaken by comparatively wealthy areas, and it has been recently suggested that a standing committee of the House of Commons should be empowered, without special legislation in each case, to sanction the granting to local authorities of fresh powers for which precedent already exists. Such a suggestion should receive the active support of this Society.

3. *Voluntary Associations.*—An administrative ideal is that public money should be spent only under the direct control of the local authority. The practice of the Ministry of Health in giving direct grants to local voluntary associations is opposed to the public interest. The result is to encourage the voluntary association to disregard the local authority and to act independently, and in such circumstances a properly coördinated scheme, with adequate care and control of expenditure of public money, becomes impossible. At the present time the Ministry of Health and the Board of Education are paying large sums of public money direct to county nursing associations, district nursing associations, welfare centres, and all kinds of voluntary associations, with results that are deplorable from the economic expenditure of public funds and the point of view of efficiency of organisation.

The strangle-hold of the big voluntary associations upon public health work has become one of the dangers of health work. No one appreciates or values more highly than myself the valuable work accomplished by small local associations for after-care of tuberculous persons and defective school-children, and also by those voluntary workers attached to maternity and infant welfare centres all over the country. These deserve the highest praise and every possible encouragement, but the big associations and "national councils," with whole-time paid officers (a curious kind of "voluntary" work), invariably attempt work which, in my opinion, is far better done by officers employed and controlled directly by local authorities.

The point of view of the unfortunate recipient of the attentions of voluntary associations rarely receives any attention, but the deputation which attended recently upon the Ministry of Health had very definite opinions upon the subject, and pressed for the abolition of the voluntary system in connexion with the welfare of the blind, and the establishment of direct municipal and State control.

Everyone with experience of work amongst poor people knows quite well how bitterly they resent the inquisitorial visits of the average voluntary worker, and how differently they regard the impartial and tactful whole-time officer of the local authority.

The ideal that public administration should be carried on by public officers and not by voluntary associations can only be departed from with grave danger to the State and to the individual. This is specially the case in connexion with the administration of the Mental Deficiency Act. The result of the influence of voluntary associations and voluntary workers has been that the scope of the Act has been strained so as to include within it cases that are not really covered by any definition in the Act. The public as a whole would probably be amazed to know exactly what has been done under the Mental Deficiency Act in this direction, and I feel sure that the public exposure of a few cases would lead immediately to a demand for an expert revision of every case now in an institution. The best "voluntary worker" is the popularly elected representative of the public upon the various local authorities. His services are purely voluntary and every medical officer of health is the expert administrative officer of a body of *genuine* "voluntary workers" who are in their turn responsible to the public. It is a curious mentality which puts a halo round self-appointed members of so-called "voluntary associations" and their (usually unqualified) officers.

D. *Central Control.*

There has been a constantly increasing public danger due to a growing inclination on the part of the central authority to make rules and regulations for all

sorts of detailed conditions, and to exercise a supervision over minutiæ of administration which, if successfully established, can only result in a degradation of local government. This pernicious tendency is the cause of an increasing irritation on the part of local government officers and local authorities. It is gratifying to be able to record the fact that recently the Prime Minister, and also the Minister of Health, expressed opinions that the powers of local authorities should be greatly increased, and that there should be greater freedom in local government.

IDEALS FOR THE SOCIETY.

A. *Membership.*

The first of our ideals with regard to the Society should be that it should secure as members every medical man in the employ of local authorities.

B. *Policy.*

During the coming year I hope that we shall begin by enunciating certain policies or ideals and in connexion with each policy commence a campaign in order to achieve progress. The Society should lead the way in public health. It should be one of the policies of this Society to issue from time to time manifestos to the public upon subjects of public health importance. Our influence was recently illustrated in connexion with the notorious milk circular issued by the Ministry of Health which in the opinion of most of our members was against the public interest. A very moderate amount of organisation on the part of the Society resulted in such an outburst of protest that the offending circular was withdrawn.

C. *Publicity.*

I have felt for some time that it is necessary for the Society to make itself more articulate. It must cultivate a public voice, not merely a professional technical voice through our journal, and must organise means whereby the public ear can be secured.

D. *The Protection of the Public.*

Another of our ideals for the Society of Medical Officers of Health should be the protection of the public from the extremist, whether the extremist be the alleged economist at one end of the scale, or the faddist who wants public money spent on all kinds of fantastic and hare-brained schemes at the other. It is heart-breaking to read the remarks recently made by an eminent medical man, to the effect that if the raising of the standard for the D.P.H. examinations should continue to result in an insufficient number of medical men entering the service on account of the inadequate salaries paid therein, then it might be necessary to reduce the standard of the examination in order to increase the supply. We do not believe that the public would allow such a betrayal of their interests.

As an illustration of the fact that the ideal solution often lies between the proposals of the extremists we may point to the opposing theories propounded by the extreme eugenists on the one side, and the sanitarians (as we might call them) on the other. The extreme eugenist is supposed to believe in selection and the elimination of the unfit as the essential means for racial improvement, while the extreme sanitarian has alternative "panaceas" in the form of sunlight, housing, welfare centres, and such like. Both these opposing bodies are right, and both are wrong. The scientific and thorough application of the eugenist principle is unthinkable in the present state of civilisation, but the necessary scientific principles which underlie the control of racial developments are perfectly sound, and will have to be followed sooner or later if the race is to be saved from unnecessary deterioration. The sanitarian's proposals must be applied to existing individuals, and the application of their methods will undoubtedly result in improvements. Without eugenic methods, however, there is grave reason to fear that the increase of insanity, the numbers and prolificacy of the feeble-minded, the survival of the weakly, and multiplication at the wrong end, will overload the race, and will drag it downwards.

The solution seems to be the adoption of both principles—i.e., the development of all members of the community by means of careful control and protection of the circumstances of life generally, accompanied by a sane and scientific elimination of the unfit of the future. We are trying at the present time to carry out this in a costly and stupid way. Our institutions for the mentally defective are overcrowded and local authorities all over the country are being urged to spend immense sums in building more. Large numbers of unfortunate people will be condemned to lifelong imprisonment in these institutions, and will never know the blessings of a free and ordinary existence, or of ordinary family life. One often hears it said that lifelong imprisonment is a far more serious punishment than a sentence of death, and yet there are fanatics, at present in control of the situation, who insist upon these unfortunate people being subjected to this life sentence instead of carrying out the very simple process of sterilisation, which would enable a considerable proportion of these people to lead more or less ordinary lives, at little or no cost to the community.

INDIVIDUAL IDEALS.

Unless, as individuals, we concentrate on our essential ideal of the prevention of disease, then we must fail. We must be ready to sacrifice our personal prejudices in favour of the crusade against disease. At any time we should be willing to sacrifice our own advancement and advantage for the benefit of the service as a whole.

Our constant fear should be lest our methods become stereotyped and our minds inelastic. Perhaps the greatest danger of all is that our individual views on religion and politics, which in most instances have grown up with us, and have become part of us, should govern our public health views and bias our work in preventive medicine. The elucidation of such problems as the prevention of venereal disease is simple if stripped of the prejudices which surround them. Similarly such thorny subjects as birth-control and mental deficiency lose many of their difficulties if the subjects are considered from the point of view of the improvement of the race. If we can establish a supreme ideal—i.e., the public health and the prevention of disease—and turn away from other ideals which we may have followed for many years, then many of our present difficulties would disappear.

Testing Results.

Among our personal ideals we must place the attainment of scientific accuracy, coupled with a determination not to accept easily-tested statements without careful verification. Fallacies should always be exposed, even if they are popular, without hesitation.

Leading Public Opinion.

So much has the general policy of the Society of Medical Officers of Health been hampered and hindered by members whose views upon the subject of public health, and particularly concerning the prevention of disease are modified by outside considerations, such as political or religious views, ideas with regard to sexual questions, &c., that at the present time the Society, instead of leading public opinion, is actually lagging behind it in many respects. While our wheels are being clogged by the prejudices of the prejudiced few, people outside the profession are overtaking us, and will soon be in advance of our opinions as a Society.

Sex Mania.

One of the most insidious obstructions to which public health advancement is liable is due to a body of persons who are obsessed with the idea of sex. These people view everything through a kind of

sexual vision and offer opposition to the scientific prevention of venereal diseases because they fear that as soon as the public are fully aware of the fact that venereal diseases are easily prevented, they will immediately indulge in an orgy of immorality. These same people have recently discovered an argument against sterilisation of mentally defective persons as opposed to perpetual imprisonment, their suggestion being that mental defectives thus treated and allowed their freedom might indulge in sexuality on account of the removal of fear of the consequences. This sex mania breaks out in various ways. Recently it has taken the direction of an attack upon the healthy and hygienic mode of dress of the modern girl.

Encouraging Results.

We should derive considerable encouragement from the experience of our past ventures which have had even greater effect than we anticipated when they were being planned. For instance, the big reduction in infant mortality that has recently taken place is, in my opinion, due essentially to the entrance of the medical officer into the schools. This, instead of decreasing parental responsibility, set up an entirely new health ideal, which soon had a profound effect in increasing both parental and public responsibility, resulting in a rapid fall in infant mortality. Talk of interference with, or lowering parental responsibility in connexion with help given to poor people in order that they and their children may be kept healthy should not be tolerated by medical officers of health. It might just as reasonably be urged that the provision of first-class roads at the public expense has lowered the moral tone of the motorists, or that free education had weakened the national backbone.

Let us take courage. We are fighting against great forces of evil which threaten to damage or destroy the human race, but we are winning, and we know that we should be winning at a much greater rate if we concentrated on progress and disregarded those clutching hands which seek on all sides to hinder our progress. If we keep our ideals before us, we shall be like Christian, who "went on his way" while "Mistrust and Timorous ran down the hill." Individually, as medical men in the service of the State, and collectively as this Society, let us say with Christian, "I must venture .... I will yet go forward."

THE TREATMENT OF MENTAL DISORDER ON A VOLUNTARY BASIS.

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Separate Treatment of Curable Willing Patients.

In this article I wish to express my personal views as to the advantages and limitations of treatment of mental disorder on a completely voluntary basis entirely apart from certified cases, and to discuss the types of case suitable for this as well as those which actually present themselves. These views are based upon an experience extending over 15 years at mental hospitals of the County of London, nearly three years' work in hospitals treating neuroses and psychoses arising from the war, study of the methods obtaining at six of the chief continental clinics, and the results of 18 months' observation as medical superintendent of the Maudsley Hospital (since its reopening on Jan. 31st, 1922).

The Maudsley Conditions.

This article is intended to be supplementary to my first annual report which was recently published.[1] This report was confined in the main to a statement of fact, all opinion being excluded that might be controversial or have a bearing on possible legislation. I must emphasise that I alone am responsible for the views now expressed.

To render the present communication intelligible apart from the report it is necessary that I should here repeat the statements which the latter contained as to (*a*) the conditions of admission, retention, and discharge; (*b*) the purposes of the hospital. (*a*) The hospital is devoted entirely to treatment on a voluntary basis. Every patient is required before admission to sign a form of application which clearly intimates his right to leave the hospital within 24 hours of giving notice of desire to do so. No patient is admitted under certificate or is certified in the hospital either for retention there or for transfer to a mental hospital elsewhere. I shall hereafter refer to these as the "Maudsley conditions," and the hospitals where they might obtain as "voluntary clinics." (*b*) The purposes of the hospital are four—viz., research, teaching, provision of facilities for diagnosis, and curative treatment.

Opinion may differ as to the relative importance of these purposes, but I shall for the most part confine myself to the relation of the "Maudsley conditions" to one object—viz., treatment of patients solely with a view to cure. This relation seems likely to be the one of most general interest. It appears to me as desirable that research and teaching should be concentrated as that separate treatment of voluntary cases should be widespread. In fact, this concentration is almost inevitable for many reasons, including cost. Briefly, however, it may be said that the "Maudsley conditions" are not detrimental to the functions of research and teaching. In fact, the hospital provides a wider range of clinical material than almost any hospital in the country. The attendance at the out-patient department includes many examples of every type of psychosis and neurosis, and numerous forms of organic nervous disease. It is not possible to admit to the wards all cases of any type, but it is possible to treat there some cases of every type as long as is desirable. Any clinic undertaking only brief treatment of patients suffering from psychoses (even though these included some detained against their will) would have to eke out its resources with those of a mental hospital for chronic cases in order to be representative. In this direction the Maudsley Hospital is, of course, fortunate in being able to draw upon the enormous resources of the L.C.C. hospitals. What cannot be obtained from elsewhere as clinical material are cases at the other end of the scale of severity. I am sure the exclusion of certified cases is at present essential in England to the acceptance of admission by both organic and functional patients whose mental symptoms are really slight. Such cases being the most interesting and valuable for research, and the most instructive for teaching, it is essential to provide a system that will attract them. The possibility of demonstrating voluntary cases is merely a question of tact.

Classification and the Criteria of Admission.

From the standpoint of their attitude towards treatment patients fall into three groups: willing, unwilling, and incapable of expressing an opinion. By distinguishing those of hopeful and unfavourable prognosis six sub-groups may be recognised. There is now fairly general agreement that the opportunity of treatment on a voluntary basis for mental disorders should be extended to those incapable of paying for it in a private institution. Such opportunity, of course, existed in no institution provided out of public funds before the opening of the Maudsley. There is, however, much less agreement as to the view that the public provision for any of the above six sub-groups should be in separate institutions.

I wish to uphold the view that the aim should be to promote treatment apart from the certified of every possible willing case—at least every hopeful one—and further to discuss the limits of this possibility. It is possible that at some future date it may

[1] See THE LANCET, Oct. 11th, p. 761.

be thought an anachronism to compel those who are willing to accept an asylum (in its original sense) on account of chronic mental disorder to associate with those detained against their will on account of anti-social tendencies. If separation were possible, I believe it would greatly reduce the present discontent among patients and their relatives, which spreads from those resenting detention to those willing to remain, and I believe a surprising number would be found to belong to the latter class. So much is done, however, in the modern mental hospitals with parole, villas, &c., to mitigate the association of chronic willing patients and of the anti-social type, that it is mainly a question of feelings. I am aware of great practical difficulties in altering the present position. There is also an arguable case for the treatment apart from the chronic insane of even the "unwilling" recent cases, say for a year.

Ignoring for the present the cases of the willing chronic, of the unwilling acute, and of the "non-volitional" cases, whether acute or chronic, confining oneself to possibilities of the near future, willingness and likelihood of recovery *from the attack* should be the sole criteria for admission to a voluntary clinic, and neither "earliness" nor mildness of symptoms. In considering mental disorders and their treatment there is apt to be a considerable confusion between the terms early, recoverable, mild, and willing, and a tendency to assume that these are interchangeable, which is far from being the truth. I see no reason why separate voluntary treatment should be confined to "first attack cases." Numerous patients have been treated at the Maudsley who had had several previous attacks—even when some of the attacks had necessitated certification. Repeated admission of suitable cases to the clinic should be allowed here as abroad. I think no attempt should be made to lay down or enforce any legal rules as to the severity or type of mental symptoms which it is permissible to treat on a voluntary footing, provided always that the treatment required must be forthcoming—e.g., adequate supervision of those who might at times be dangerous to themselves or others. Certainty as to adequate treatment as well as real willingness of the patient require that authority to treat patients on the voluntary basis be only granted in such a manner as to admit of really satisfactory supervision by an external and expert authority. The danger of abuse in these matters would probably, however, be much less in a voluntary clinic under a public authority than in homes or small institutions run for private profit, whatever their rival merits in other respects.

The question of what type of symptoms will often be found to render it inexpedient to retain a given patient in a voluntary clinic is, of course, an entirely separate one from a legal limit. This question will be discussed later.

Advantages of Separate Treatment of Voluntary Cases of All Degrees of Severity.

(1) Much stress has been laid on the stigma associated with certification. I take leave to doubt that this will be much decreased by admission as a voluntary boarder or a non-volitional case to one of those mental hospitals whose names are household words. Especially would this be the case if these patients were treated with the involuntary inmates, and liable to be certified and transferred to that class in the same institution. The chief difference would seem to be in the patient's own feelings, and perhaps in some of those grosser disabilities (such as dissolution of partnership) apt to follow certification. On the other hand, there is no doubt that admission to an exclusively voluntary clinic would be distinguished by the public here, as it is abroad, from admission to a mental hospital.

(2) If it is desired to get cases early for treatment it must be recognised that the great majority of the public will not go or send their relatives to the ordinary mental hospital till this is unavoidable. This is, in part, a question of utterly unfair disrepute, in part of facts. Nobody is more aware than I of the absurdity of the charges made against the treatment in the mental hospitals, particularly those of the County of London with which I am familiar. Nobody could possibly have a higher respect for their work, including its medical aspect. In my report I deprecated all comparison between the results of the Maudsley and the mental hospitals, because such a comparison is utterly unfair to the latter institutions. But there is a difference of attitude on the part of the public which is impossible to ignore, and which is brought home daily to those who have worked at both types of hospital. It is not possible entirely to abolish this distinction by patience and propaganda, because it is not altogether unreasonable, depending, as it does, on the indisputable fact that for some of their patients the mental hospitals are places of detention rather than treatment.

(3) It is possible to give a much higher degree of liberty in a hospital where all patients are voluntary and selected. This liberty is one of the chief requirements to attract patients. But even when restrictions are necessary they are much more cheerfully borne when there is an alternative to submission. Progressive restoration of liberty and responsibility outside as well as in the hospital is a most important feature of treatment, especially of the "neuroses," and is hardly practicable in a mental hospital.

(4) The institution of separate voluntary hospitals for hopeful cases seems to me the only chance of providing, for all such, suitable personnel in the numbers required according to modern ideas. There is undeniable difficulty in filling the insufficient present number of medical posts at the mental hospitals with energetic and efficient men interested in their profession. Exactly the same difficulty exists abroad, and it is inherent in the nature of the work. On the other hand, there is no difficulty on the continent in obtaining the large staff needed in the psychiatric clinics, especially when these are also neurological. I believe it will prove possible also to get a much better type of nursing staff for voluntary clinics.

The best evidence in favour of complete separation of voluntary cases consists in a difference of general atmosphere obvious to everyone working in a hospital admitting such cases only, and familiar with other hospitals where some patients are compulsorily detained. Coupled with the absence of the monotonous daily demands for discharge, which are so depressing to fellow patients as well as the doctors, one notes a greater degree of cheerfulness, contentment at least with the conditions of the hospital even if the patients are unhappy about other matters, and almost total absence of quarrelling with fellow patients. Patients are far more tractable, and breaches of hospital rules of any kind very rare. The attitude to both medical and nursing staff is quite different. An expression of gratitude on discharge by patients and relatives, whether in words or by letter, is practically universal. A large proportion of those discharged subsequently attend regularly in the out-patient department. Where this is unnecessary, many come back at intervals to see nurses and fellow patients in the wards, and this is encouraged. Requests for readmission are numerous from those who have had to be discharged owing to improbability of further material improvement, from those who have relapsed after improvement, and from those who have discharged themselves contrary to advice. The last type of such request has occurred several times within a few days of discharge; it is acceded to where possible. All these differences depend upon the type of case under treatment as well as upon the treatment provided, and the system acts by selection as well as directly. But at least it may be said that it reduces the disagreeable aspects of treatment for those selected, and is therefore presumably conducive to recovery.

Respective Provinces of the Voluntary Clinic and Present Mental Hospitals.

Even were there a provision of such hospitals as the Maudsley for all willing cases of recoverable

mental disorder, they would only be a supplement and not a substitute for the ordinary mental hospital. Experience shows that there are very numerous eminently recoverable cases that cannot be treated at a voluntary clinic—e.g., many cases of acute mania and acute confusional states—either because the patient will not consent to admission, or will not remain until discharge is safe, or is intolerably disturbing to other voluntary cases. There can be no doubt of the desirability of the extension to the ordinary county mental hospitals of the power to receive voluntary cases; many who have recovered from an attack will doubtless return there by preference in event of relapse. I think the power of receipt of "non-volitional" cases (with the right of discharge on request) would be chiefly useful in the ordinary mental hospitals for reasons discussed below. Neither of these arrangements, however, will in any way diminish the need for such hospitals as the Maudsley intended *solely* for voluntary cases. An extensive previous knowledge of the types admitted to an ordinary county mental hospital and comparison of these with cases treated at the Maudsley leaves no doubt in the mind of my colleagues and myself that a very large proportion of patients now certified could be treated in such clinics until it was clear whether recovery were possible, and in favourable cases until recovery.

Certain Objections to the Maudsley Conditions Examined.

Almost every conceivable criticism has been directed against this system in an entirely friendly spirit. The fact that many of the criticisms are mutually contradictory leaves it still possible that some are sound. In fact, there is some force in most of the arguments, but modification made according to the suggestions received would have disadvantages out of proportion. There is no one of the rules to which exception would not occasionally be desirable, but rules are necessary and hard cases make bad law. The acceptance of all the objections and suggested alterations discussed below would leave the Maudsley indistinguishable from the ordinary registered mental hospital. At the end of 18 months I am obstinately convinced that the great balance of advantage for the purposes of the hospital rests with rigid adherence to the policy of maximum liberty deliberately adopted. Among my colleagues there have been some familiar with the conditions of registered hospitals and of mental hospitals of this country, and of numerous clinics of the continent and America. I am not aware that one has held that the balance of advantage would rest with the reversal of any item of the policy adopted at the Maudsley.

(1) It was prophesied by some that it would prove impossible to fill the hospital. The figures for the first year's working are a sufficient answer. 1012 cases were treated, including 894 as out-patients and 452 as in-patients, and there was probably a nearly equal number of those applying by letter who were rejected as ineligible without interview. Fullness depends, of course, solely on stringency of selection for admission and readiness of discharge. Undoubtedly there is less pressure on male wards for neurotics, because they cannot afford to leave employment.

(2) It was said on the one hand that admissions would consist entirely of undesirable neurotics of whom it would be difficult to get rid, and, on the other hand, that it would prove impossible to treat neuroses and psychoses in the same hospital since those with milder symptoms would absolutely object to contact with others whom they would consider insane. The truth in these matters appears to be this. Here, as wherever voluntary patients are treated, *some* are of a dependent type loth to leave their refuge, but by no means all. There is no resemblance in this matter to the situation in hospitals for war neuroses and particularly those for pensioners. That cases of varying severity are incompatible is a fallacy, provided a fair chance is given for classification. The conditions of the acuter wards are not resented by those needing them. Many contentedly convalescing in acute wards to which they have been admitted will demand discharge rather than accept transfer to a quiet ward. There is little more difficulty about transfer in the opposite direction if all semblance of its use as a disciplinary measure is avoided. In view of the frequency of acute developments in cases where it is impossible to forecast these, to abolish treatment of severe cases would stultify the work of the hospital. The sympathy and tolerance which the less deranged show for those who are more so are remarkable. Practically the only intolerable characteristic is persistent noisiness, which will be further discussed later.

(3) *Admission of severe cases under certificate has been urged on three chief grounds:* (*a*) It would render the hospital more representative for teaching and research; this has been discussed. (*b*) It would render the Maudsley Hospital more useful as an auxiliary to the mental hospitals of the county by facilitating treatment of special cases from these. This would be an excellent object if it were not incompatible with the Maudsley doing its own work. In a majority of suitable cases the difficulty can be simply overcome by discharge from certificate, and this has been done in certain cases. (*c*) It would render possible treatment of some most hopeful cases: those of acute psychoses, where the patient is definitely unwilling. The arguments used below in connexion with the question of admitting non-volitional cases largely cover this point.

(4) *Retention under certificate of certain cases that give notice* has been advocated on the ground of experience in registered hospitals, showing that some voluntary borders are very unsettled till the decision to go or stay is taken out of their hands and then they rapidly improve. These may be balanced to some extent by anxiety cases aggravated by the fear of certification.

(5) *Certification at the Maudsley* of those cases needing transfer to a mental hospital has been thought desirable on the ground that it is the duty of the medical officer who has had the patient under observation to accept the responsibility. Personally, I think it would be an infringement of the spirit of the undertaking upon which a voluntary boarder is received. If a patient is to be certified for transfer it matters little to him who performs the act, but if it be at all practicable I think he should be sent elsewhere for examination by a doctor who may decide against the need for certification. During the tenure of the Maudsley Hospital by the Ministry of Pensions patients were certified for direct transfer to a county mental hospital by the medical officer in charge of the ward and myself as medical superintendent. It was perfectly clear that my visits to certain wards gave rise to uneasy wonder as to whose turn had come now, and any interview which I had with a patient was apt to be a source of terror. I do not believe it would be a material improvement to introduce outside practitioners to certify for transfer, as they would soon become known.

The Question of Admitting the "Non-Volitional" Patient to Voluntary Clinics.

It has been truly emphasised that exclusion of the certified prevents admission, at any rate for the present, not only of the unwilling but of the patients that are too confused to express an opinion either way, and that the latter class includes many of the most hopeful cases. It was decided at the Maudsley Hospital to accept this limitation and to await the passage of a Bill rendering possible the admission of such cases without certification (though subject to adequate safeguards before reception, and to the proviso that the patient would have the same right as a voluntary boarder to discharge within a specified time of his giving notice of desire for this). I should not regard admission under such conditions as any infringement of the voluntary principle, but I am much more doubtful than a year ago how far the legalisation of such admissions would benefit the Maudsley Hospital. I am fairly sure that it would

not be of much advantage without considerable additions to both staff and structure. It is now clear that the total number of acute cases that can be obtained under the purely voluntary system is greater than the staff can manage. The problem, e.g., with many cases of mania is not to obtain consent for admission, but to get them to remain until discharge is safe, and this would probably arise with many of the confusional cases. It *might* prove possible without increase in the total number of severe cases to substitute non-volitional patients of better prognosis for some of the psychotics obtainable under entirely voluntary arrangements. But this would require very careful selection of cases, and if the change involved any decrease in power of personal selection by the staff of the hospital it would probably be detrimental and merely lead to a larger number of cases passing through the wards en route to the county mental hospitals. It is necessary to limit the number of noisy cases; persistent noisiness rapidly arouses protests (especially among those to whom the particular patient is unknown) and it raises the problem of getting rid of the noisy patient or losing several others. Moreover, those living in houses near the hospital object. When the accommodation for voluntary curable cases is increased, the reception of more acute cases, including non-volitional ones, will be very desirable if special sound-proof buildings can be provided, and almost impracticable without this provision. The coördination of the work of the voluntary clinics and of the mental hospitals would be greatly helped by the establishment (under the same authority controlling these) of receiving wards, replacing the present observation wards of the workhouses. Expert selection of cases for the two types of institution would then be possible, and patients could be returned for disposal if they became unsuitable for the clinics or unwilling while still requiring treatment. But if the voluntary character is to be maintained the access to the clinics for the majority of cases should be direct, through its own out-patient department, as at the Maudsley Hospital.

Cases Suitable for Treatment.

To me it is almost a truism not only that such hospitals as the Maudsley should exist, but that every hopeful case desiring treatment for mental disturbances is entitled to such opportunities of treatment, apart from those *detained* on account of such disorders. Suitable accommodation should be available to allow of this for every type of such cases, even though the cost per patient for such separate treatment should approximate to that for acute bodily illness (as it does at the Maudsley). But this will remain an ideal until the number of those willing to work and to pay for real improvement begins to approach that of the people who merely enjoy having their blood curdled with tales of imaginary horrors. Into the practical question of eligibility for treatment at the Maudsley three main considerations enter: (*a*) Prognosis; (*b*) the presence or absence of certain practically important features; (*c*) scientific interest. Each of these is a complex question; in practice they are inextricably connected. They are stated in order of importance, but here the last will be ignored, and the second discussed, before entering upon a necessarily brief essay regarding indications of prognosis.

Special Features Influencing Eligibility.

One possible primary division of mental cases is into those *with* and those *without* well-defined physical causes and symptoms. Such a division is, of course, largely artificial. One believes all mental disorders to have an organic basis, and, on the other hand, even where obviously physical factors are present, causes belonging to the three other groups mentioned below may even preponderate. Cases with organic disease, however, are especially eligible for three reasons: (1) Scientific interest, especially for investigation with a view to detection of changes that in lesser degree may at least contribute to determination of "functional" psychoses and neuroses. (2) Promotion of the hospital rather than the asylum atmosphere. Most similar institutions abroad are the university clinic in neurology as well as psychiatry. At the Maudsley Hospital many cases of organic nervous diseases are admitted where mental symptoms are minimal or of bad prognosis. (3) Good prognosis in a large proportion of cases. The mental prospects, of course, are usually proportionate to the curability of the physical disease, but this is by no means uniformly so. Mental recovery often only requires the establishment of some conditional or even temporary compensation, as in diabetes and Bright's disease, valvular disease, and arterio-sclerosis. In the latter recovery is common from a state simulating advanced dementia. Disregarding the frequency of general paralysis, causal organic disease plays a much larger part at the Maudsley than in an ordinary mental hospital, and is of much greater variety. This is one of the features giving special value to clinical work here. An example is hyperthyroidism. Though the term was confined to well-defined cases showing marked enlargement, with such symptoms as tremor, tachycardia, and vasomotor abnormalities, there were 24 such cases among the first 1000 patients. This is a much larger proportion than would be seen at an ordinary mental hospital, the explanation being that while a neurosis is almost constant in hyperthyroidism it only rarely leads to a psychosis. It is an interesting fact that of 24 cases of neurosyphilis in the same first 1000 patients, there was not one of the interstitial variety nor one in which anti-syphilitic treatment did material good. Cases of the interstitial type are uncommon in mental hospitals, but not so rare as this would suggest, and it might be expected that more would be seen here. Probably the explanation is that early signs are usually clearly physical, leading to attendance at a hospital for organic nervous disease, and that when mental symptoms occur they are most often of a kind unlikely to lead to application here, commonly deterioration of a sort apt to be mistaken for the dementing type of G.P.I. In the first 1000 cases there were 11 illustrating sequelæ of epidemic encephalitis; the proportion has increased lately.

"*Psychoses*" *and* "*Neuroses.*"—To me these terms denote two degrees of mental disorder that usually in the poor are respectively treated under certificate and not treated at all. If this is not the distinction, they seem to be mere pseudo-scientific euphemisms corresponding to the more popular absurdity, "It is not mental, it's only the nerves." The difference proves often to be a temporary one; that it is more, seems to be most strongly held by those whose experience for practical reasons is mainly limited to one or other type. I am not entirely unfamiliar with more elaborate distinctions, but perhaps my crude simplicity may resemble that of the child unable to see the king's new clothes. It is common and useful in practice to assure neurotics that such patients do not become insane; unfortunately it is not true. I think no one with a year's clinical experience at the Maudsley would be disposed to deny the transition from typical neurosis to typical psychosis, either in a series of different cases or in the same case at different times. Maintenance of the reality of the traditional distinction between neuroses and psychoses is merely pandering to the popular tendency to regard insanity as something horrible and different from all other disease. Every effort is needed to break down the barrier. The possibility of joint treatment in voluntary clinics of neuroses and psychoses has been discussed; it is not necessary to discuss its advisability because it is inevitable and in force in numerous continental and American clinics. At the Maudsley two-thirds of the beds are in wards suitable for treatment of "neuroses," but owing to the longer average treatment of such, only two-fifths of the first 1000 cases were "neuroses."

Particular Symptoms and Syndromes.—The relation of these to eligibility apart from prognosis cannot be extensively discussed. Cases of mania, though eminently recoverable, are disappointing on account

of the frequency with which they give premature notice. They are almost the only favourable type with whom this is common. Noisiness rendering them unsuitable on account of fellow patients and neighbours has been discussed. Obscenity and extreme degrees of violence may require discharge where, as at the Maudsley, even the male acute ward is partly staffed by women. But, so true is it that male cases are often better nursed by women, that I think few desirable patients would need rejection or discharge if the ordinary staff were wholly female with a reserve of male nurses merely for special duties and emergencies. Paranoid cases, on account of disposition to include the hospital in their persecutory scheme, are usually undesirable. Suicidal tendency, in my opinion, should not be considered a bar to voluntary treatment, provided the patient will accept the measures necessary for his treatment. The "safety first treatment" of melancholia is responsible for not a few chronic cases and perhaps some suicides. It is time to face the inevitable reward of taking reasonable risks.

Indications for Prognosis.

Under this heading I propose merely to suggest considerations as to probable recovery from the attack of mental disorder which should at a preliminary interview influence one's decision regarding admission to a voluntary clinic.

(*a*) *Ætiology: General Principles.*—In every case of mental disorder four sets of causes are operative: (1) The innate structure of the whole organism; (2) the changes in it which normally or commonly occur at various ages or such physiological epochs as the events of sexual life; (3) changes induced and dispositions left as the correlates of mental experiences; (4) changes resulting from influences of a purely physical kind. Among the "functional" cases it is futile to try to discriminate groups due to one or even two of the first three factors. All three so interact in every case as to render useless attempts to separate such groups—e.g., Kraepelin's "paranoia."

(1) *Innate or early constitutional tendency* may be indicated by (*a*) family history, (*b*) very early anomalies, either intellectual or temperamental. Neither of these has much bearing on prognosis of recovery from the attack. (*a*) In no form of mental disease is heredity more pronounced than in the manic-depressive type. (*b*) Recovery is common from the psychoses of all forms often superimposed on amentia and constitutional psychopathic tendencies of every kind and degree. If the latter do not per se disqualify for social usefulness, they do not disqualify for treatment of the psychosis in a voluntary clinic. Particularly, of course, is this so when temperamental anomalies are themselves intermittent.

(2) *Association with particular ages and phases of life.*—Practically all extensive statistics bearing on this are vitiated by the fact that only certifiable cases—e.g., in adolescence—have been considered. The question of "dementia præcox" is discussed below. Recurrences in the elderly are, of course, quite hopeful; even first attacks are so, if not associated with dementia. The only other point of note in this connexion is the good outlook in cases *really* dating from pregnancy or childbirth.

(3) *Association with a recent external stress* is the first important single indication for prognosis in functional as in organic disease. There are, of course, various fallacies regarding the relation of the "stress" and the symptoms which cannot be detailed here. The adequate forms of stress correspond in number and relative frequency to the situations which give rise to intense unpleasant emotion in a human being.

(*b*) *Time Relations of the Disorder* are the second important indication. Recency and suddenness of onset of the present attack or a history of previous ones like it *really* followed by recovery are among the points rendering a case most eligible. But these points are so connected with the ætiology and form, that though these time relations are the most valuable index, their significance cannot be fully discussed here and no figures can be given.

(*c*) *Form of the Symptoms.*—This is the last and the most misleading indication for prognosis. Assessment of their value requires prolonged experience and a profound distrust of text-books. Given these one may at least appreciate one's ignorance. To my mind, the various subdivisions of the "functional" group of psychoses are merely syndromes whose names are descriptive terms for a somewhat ill-defined group of mental symptoms present at the moment. I do not believe that any one of them is likely to be more than that, or that the cases of any one group have a constant single cause, either physical or psychical, though presumably each group has *something* specific in its morbid anatomy of a kind which cannot yet be demonstrated. The tendency for investigation to end in the application of some name, and in satisfaction with a merely statistical prognosis based on that name, is a dreadful example of the power of words to stereotype thought. The course of disease depends upon cause, and it is therefore neither to be expected nor is it found that course is parallel to the clinical picture when first seen. The degree to which this is the case has been greatly exaggerated, and any correspondence depends largely upon a process of "waiting and seeing," followed by argument in a circle. For example, I believe the traditional prognosis of "dementia præcox" is largely arrived at by abstaining from applying the name except to cases which duration, &c., have already shown to be hopeless.

If the symptoms constituting *dementia præcox* were defined, and the name *schizophrenia* as a descriptive term without implied prognosis were conscientiously applied to every case showing those symptoms, then I think the prognosis would be found to be very different. I believe this to be borne out by results seen here in what one might term "acute dementia præcox" (of every sub-type), and that it is of great importance in regulating admissions. The schizophrenic mode of reaction depends largely on the age of the patient, regardless of cause, and so has no constant prognosis.

If one uses the term *paranoid states* to include all cases resembling Kraepelin's paranoia and paraphrenia (regardless of minor symptomatic differences—e.g., presence or absence of hallucinations and preponderance of internal or external factors in causation), then a proportion of such cases will be found to recover or to remit and recur in the manner described in text-books as characteristic of manic-depressive psychosis. A proportion will therefore justify admission, but I am not clear how they are to be distinguished by symptoms. Nor does the difference clearly depend on any of the ætiological factors, even could these be fully ascertained before admission, which is often not the case.

The term *manic-depressive psychosis* seems best applied in the sense of Kraepelin's later work to all those states where emotional anomalies are the prominent factors, whether of lifelong duration or occurring in a single attack or in recurrent phases of any form. This type is, of course, relatively favourable as regards the attack. But it merges (through transitional cases in which the misfortunes are ascribed to the faults of self and others respectively in varying ratio) into the paranoid types and so to the prognosis of this.

Under the term neuroses one may include hysteria, neurasthenia, anxiety states, and obsessional states. Their prognosis, of course, varies enormously with ætiology, time relations, previous treatment, and here perhaps especially evidence as to the usual "make up." An important point is the great frequency with which a case quite indistinguishable before admission from a "neurosis," which remains stationary as such, will later show symptoms clearly assigning it to one of the "psychoses," such as dementia præcox, manic-depressive psychosis, or a paranoid state. The distinction with certainty before admission is

impossible. Personally, I am increasingly impressed by the difficulty of making anything but a statistical prognosis in all types of functional psychosis or distinguishing except by "waiting and seeing" those cases which are going to get well from the attack or permanently. Some tests, whether physical or psychological, on which to base an individual prognosis are a crying need. I think it is one of the great functions of a hospital like the Maudsley, treating all types of case and in touch with all the main mental hospitals of London, to lay the foundations of this. Great importance therefore attaches to efforts now in force to obtain all after-histories by periodical inquiries, and correlate these with symptoms and laboratory tests.

It might be said that the foregoing discussion of indications for individual prognosis in cases of functional mental disorder amount to a confession of ignorance. Constitutional predisposition is negligible, relation to external stress can often only be estimated after admission, form of symptoms is misleading. Recency and suddenness or previous recovery are the best indications, but to deduce the future only after sufficient experience of the past can hardly be called prognosis. A hopeful confession of ignorance is perhaps the beginning of wisdom. I call my view hopeful because it implies that there are hardly any recent "functional" cases where the chance of recovery can be excluded, and few that are not worth a trial under the best conditions. Our experience here points two morals, the need of ample similar accommodation and of patience in the most doubtful case. Perhaps the most humiliating kind of experience is the swift recovery at a mental hospital of cases sent there as probably hopeless. Perhaps the most satisfying is the protracted miracle of complete recovery in cases of melancholia—often delusional—kept for many months though seeming to hover on the brink of dementia or death.

FOUR NEOPLASMS OF THE EXTERNAL EAR.

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THE following four neoplasms of the external ear—three from the auricle and one from the external meatus—are of interest, because two of them demonstrate the insidious way in which malignant disease may begin, while the last to be described shows how easily a mistaken diagnosis may arise in the case of a rare condition.

I.—A. B., 52, a porter, attended at the Royal Ear Hospital in December, 1905. Two months earlier he had noticed a small nodule in the left pinna which "felt like a shot under the skin." This growth enlarged and ulcerated after one month. On examination, a hard, raised ulcer, about the size of a sixpence, was found situated in the fossa of the antihelix. No glandular enlargement was discoverable. The whole pinna was removed with the exception of the lobule, flaps being taken from the anterior and posterior surfaces of the concha. Recovery was uneventful. Microscopically the growth (which is now in the Museum of the Royal College of Surgeons of England) proved to be epithelioma.

II.—C. D., 56, medical practitioner, consulted M. Y. in December, 1911. He had noted for eight months the formation of a scab on the superior margin of the fold of the helix of the left auricle. The scabs either fell or were picked off, leaving a raw surface. This surface was about the size of a millet seed, and the tissue immediately beneath and around it was perceptibly thickened. The whole area did not exceed one-eighth of an inch square. The patient volunteered that he was subject to chilblains of the ears, and that he had considered this to be the result of one. He stated that various treatments, including the galvanocautery, had been tried without benefit. A small wedge-shaped piece to include the growth was removed, and a collodion-wool dressing applied.

The report of the Clinical Research Association was as follows:—

"The section of skin shows epithelial processes growing down into the subjacent connective tissue; in each case where this occurs it is seen that the basement membrane is lacking at the point of extension. One process is branched and is spreading laterally, associated there are well-marked areas of round-cell inflammation. The condition is to be regarded as one of early malignancy."

A letter from Dr. C. D., dated Dec. 20th, 1923, says, in reply to inquiries:—

"I still have my ear intact and no sign whatever of a malignant growth. Both ears are 'delicate' and subject to frost-bites and chilblains in winter."

III.—E. F., 57, medical practitioner, consulted M. Y. in December, 1923, for a growth apparently similar to that of C. D. It was situated upon the edge of the fold of the helix of the right auricle opposite to "Darwin's tubercle." It had been noted for a few weeks only, and the chief symptom complained of was pain when lying upon the right ear at night, a discomfort which was sufficient to prevent sleep. The scab and the abraded surface beneath it was precisely similar to that in C. D.'s case, and at once recalled it to the mind. The growth was similarly removed and a collodion dressing applied. There has been no recurrence after over six months.

The report of Dr. H. G. Butterfield, who has also furnished the photomicrograph in Fig. 1, is as follows:—

"The specimen in this case consisted of a small nodule of tissue, roughly lenticular in shape, which measured approximately four millimetres in its greatest dimensions. Under the microscope the changes seen are all in connexion with the stratified squamous epithelium of the skin, which shows at the central point a deep ulceration and a complete break in the recognisable elements of the normal skin epithelium, and leaves the subjacent cartilage covered merely by connective tissue, and above that dense amorphous material apparently keratinised. On either side of this deep ulcerated centre the epithelium shows greatly enlarged papillæ of quite irregular outline, and five or six completely detached small islands of epithelial cells showing the characteristic layers of skin epithelium. The connective tissue under the epithelium and in the neighbourhood of the detached islands of cells shows the small round-celled infiltrations characteristic of inflammatory reaction. The characters of the specimen as a whole, with the ulceration, the irregularly enlarged papillæ extending into the subcutaneous connective tissue, and the detached islets of cells growing there, point to the conclusion that the condition is an instance of a very early epithelioma of the pinna. The accompanying low-power photomicrograph (Fig. 1) gives an accurate general idea of the relationships of the different tissues included in the specimen. It is taken from a point away from the centre, since in the paraffin sections it was impossible to get the section flat enough for a photograph owing to the presence of tissues of varying consistence, and the specimen was so small that the application of the freezing process would have risked its being spoilt."

FIG. I.

Early epithelioma of pinna. × 20.

The above three cases are characteristic of the very low malignancy of epitheliomata of the external ear. In our opinion, the malignant growths which commence apparently at the inner end of the meatus,

and are usually found in connexion with a history of discharge existing for many years, really originate from the tympanum.

IV.—The fourth case is of a different character. It is not only of interest as showing how one can be deceived in the examination of a growth in the meatus, but it is remarkable for its rarity. We have hitherto met with no growth originating in the ceruminous glands.

Miss E. F., aged 45, consulted M. Y. in April, 1919, for gradually increasing deafness in the right ear. She had already consulted a general surgeon, who had informed her

FIG. 2.

Tumour of external auditory meatus. × 120.

that she had a "bony growth" in the passage. On examination, the meatus was found to be occluded by what appeared to be an ivory exostosis. It was smooth, very hard, and apparently immovable when investigated with a probe. As she was averse to operation and there were no symptoms beyond the deafness, inaction was advised. She returned in November, 1923, complaining of increased sense of obstruction, slight occasional pain, headache, buzzing, vertigo, and nausea. The exostosis was as hard as ever, but seemed to be a little smaller and very slightly movable. It was suspected that it might be a pedunculated exostosis and removal suggested. The operation was agreed to and performed in December, 1923. A stout wire snare brought it away remarkably easily. The attachment was by a moderately broad base to the superior posterior meatal wall at the junction of the cartilaginous and bony portions. The ear was packed, bleeding being very slight. The patient was seen again in March, 1924, and the meatus was found to be perfectly healed and without any sign of recurrence. Indeed, one could not recognise any indication of the spot from which the neoplasm had been removed. The membrana tympani was a little thickened but of normal inclination, and the hearing for the whisper was 15 feet for either ear.

The growth was bisected with difficulty with a scalpel, and the cut surface appeared to be that of a dense fibroma. It was handed to Dr. Butterfield for microscopic examination, and the following is his report:—

"The specimen as received for examination consisted of a plaque of dense tissue removed from the surface of the external auditory meatus. It was pale in colour, distinctly hard, and measured approximately half an inch in diameter with a thickness of an eighth of an inch. This was embedded in paraffin through carbon bisulphide, and sections cut in the usual manner at right angles to the skin surface. The stratified squamous epithelium shows under the microscope no break in the continuity of its surface and no changes in the character of its constituent cells. Its outline on the deep surface is clear and definite, and immediately under it is a layer of dense fully-formed connective tissue showing here and there collections of small round cells. The whole of the remainder of the tissue consists of an irregular meshwork of dense fully-formed connective tissue fibres containing in its spaces cells of a totally different character, which vary in their arrangement from small solid masses to irregular tubular glands lined with a layer of cells varying in thickness. These cells show nothing in their appearance suggestive of a connective tissue origin, and their demarcation from the strands of connective tissue in which they are embedded is clear and well defined. They show a tendency to stain with alkaline rather than with acid dyes, and the nucleoli are hardly differentiated at all from the body of the nucleus. The blood-vessels seen have all a quite definite structure, and there are nowhere any signs of the tumour cells themselves acting as the walls of blood spaces.

The sections under a moderate magnification give an impression of a general resemblance to a rodent ulcer without the density and regular staining which characterise that condition, while the appearance and arrangement of the cells suggest very strongly that their origin is from the ceruminous glands of the external auditory meatus. The photomicrograph (Fig. 2) shows a characteristic portion of the mass of the tumour."

BAYER "G. 1919" IN THE TREATMENT OF FILARIASIS.

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THE treatment of filariasis is still in an unsatisfactory condition. Several papers on the subject, dealing with the exhibition of drugs, such as antimony tartrate, arsenic, emetine, &c., in such cases have already been published by one of us[1] (G. C. L.). So far no drug has given satisfactory results.

The success which followed the treatment of trypanosomiasis with the substance known as Bayer "205" inspired the hope that a new preparation, known as Bayer "G. 1919," manufactured by the same company and recommended as effective in filariasis, might lead to equally satisfactory results. Through the kindness of Dr. P. H. Manson-Bahr a supply of this drug was obtained, and a suitable case of filariasis being under our care at the time, we decided to give the new preparation a thorough trial.

Bayer "G. 1919" is a coarsely granular powder. It is easily soluble in water or physiological salt solution, but the solution must not be kept for more than 24 hours. It is stated to be effective against syphilis, but is not as potent as salvarsan. Administration is by intravenous methods, and the amount recommended for each injection is 0·5 g. dissolved in 5 c.cm. of sterile distilled water. One injection may be given weekly for ten weeks—e.g., a total of 5 g. in all. If given in larger doses nephritis and dermatitis may be caused, therefore it is not advisable to exceed the dose of 0·5 g.

Two Recorded Cases.

Two cases are on record in which the drug has been given.

CASE 1.—A patient with an infection of *Filaria loa*, in February, 1922, developed neuritic pains subsequently to the exhibition of the drug, but after-treatment is reported to have had no further symptoms of the disease.

CASE 2.—A lady with "wandering filariæ and embryos in her blood." After treatment no more microfilariæ were noted. Later she suffered from jaundice, but this was not definitely attributed to the drug.

In the trial of a new preparation one cannot too fully emphasise the importance of conducting prolonged examinations, hence on this occasion we followed our usual custom of examining measured quantities of the blood before, during, and after treatment to demonstrate what effect, if any, the drug

[1] THE LANCET, 1920, ii., 551; 1921, i., 221.

had upon the embryos, which would, of course, disappear in the event of the adults being killed. We believe that this is the only way to determine the efficacy or otherwise of the substance undergoing the test.

The Selected Case.

The details of the case selected for treatment were as follows:—

History.—A. R., 42, Indian native, born in Calcutta, where he lived till going to sea ten years ago. Has sailed a lot between India and the China Coast. Last voyage from Bombay to England.

Previous Illnesses.—Syphilis eight years ago; no history of malaria or dysentery.

Present Illness.—Patient quite well on leaving Bombay, but after a fortnight at sea a pyrexial attack developed which lasted about three days. Since that date some fever at night and pain after micturition.

Examination.—There was little or nothing to make out in the patient's physical examination. A few enlarged glands on left side of neck. Some bronchitis present. Systolic murmur at apex of heart. Abdomen: spleen and liver not enlarged. Glands in both groins enlarged and shotty. Scrotum enlarged, lymphatics on both sides varicose. Slight hydrocele on left side with enlargement of left testis. C.N.S. nothing abnormal.

Blood.—Red corpuscles, 4,900,000; white corpuscles, 9000; Hb 100 per cent. Differential: P.M.N. 77 per cent.; L.M., 10 per cent.; L., 11 per cent.; E., 2 per cent. Night blood: Many embryos of *Filaria bancrofti* present. No malarial parasites; Wassermann reaction negative.

Fæces.—No ova, no protozoa.

Urine.—Sp. gr. 1018, alkaline, no sugar; albumin, a trace; phosphates present; no blood; a few pus cells; no embryonic filariæ.

Sputum.—No tubercle bacilli.

Filarial Condition.—Hydrocele and enlarged testis very likely filarial, as also the dilated lymphatics of scrotum.

After the first few days in hospital the chest condition improved; the pain on micturition disappeared, and the urine became free from albumin and pus cells, remaining so up to the date of commencing treatment.

As the case presented such a heavy filarial infection, as evidenced by the numerous embryos in the blood, it was resolved to carry out an accurate analysis of those, both before, during, and after the administration of the drug.

The test was started on May 23rd, 1924, and continued without intermission until August 11th, a period of 11 weeks and 3 days, 20 c.mm. of blood being taken at 11.55 each night, and the number of embryonic filariæ in this amount counted on the following morning. Weekly injections of the drug were given, the injection being given between 2 and 3 P.M. Previous experiences have shown that for certain unknown reasons the number of the embryos in the blood varies from time to time. They may almost completely disappear for a period, quite irrespective of treatment, and it is well known that an attack of lymphangitis may cause their complete disappearance from the peripheral circulation, with no subsequent return.

Account of the Test.

All the injections were well borne with the exception of that on June 18th. This injection, the fourth of the series, was followed in one hour by a rise of temperature to 100° F., with a slight rigor; pulse 112. By night the temperature had again fallen to normal. On no other occasion did those symptoms recur. With two exceptions the range of variation of the temperature was from 97° to 99° during the period of the trial, the rise taking place in the evening. The first exception was that mentioned above, when the rigor occurred. The second was on July 12th, when at 10 A.M. it reached 100°; pulse 96. No factor to account for this could be found. An injection had been given the previous day, but it had been well borne.

The infection was a heavy one. Before treatment was begun the average number of embryos in the 20 c.mm. of blood taken each night was over 230. The usual variations in the number occurred from time to time, sometimes the rise or fall on successive nights was extreme, as on May 28th–29th, 264 to 136; July 11th–12th, 200 to 75; July 9th–10th, 100 to 215; and August 2nd–3rd, 88 to 192. The second night (May 29th) after the first injection the first marked fall appeared. This, though it raised hopes of success at the time, did not occur again, but on the contrary the variations after subsequent injections always remained small, some even showing an upward tendency.

It was observed that during the time of treatment the average number of embryos per night was less than that of the short period preceding the first dose of the drug. No steady diminution took place, however, such as would have been expected were the drug acting in a beneficial manner and killing the adults; but it is noticeable that even after the prescribed course had been completed the counts for August 3rd and 4th showed a marked rise again, the figures being 192 and 172 respectively.

As the drug had been stated to cause nephritis and dermatitis a watch was kept upon the condition of the skin and kidneys. No symptoms nor signs of dermatitis appeared. On June 23rd a slight trace of albumin and a few pus cells appeared. The trace of albumin persisted till the termination of treatment, while the pus disappeared almost at once. No casts were observed at any time. The kidneys, therefore, cannot be said to have been unduly affected.

During the week preceding the last injection the patient complained of slight dizziness, some soreness of the mouth, and anorexia. A few small, whitish, stomatitic patches appeared on the buccal mucosa, but none of these symptoms persisted more than a few days. A steady diminution in weight to the extent of 4 lb. in all was manifest during the final period of treatment, but on its conclusion the patient's general condition was good, and he felt in better health than on admission to hospital.

Conclusions.

In conclusion, it will be seen that the drug has failed to justify the claim of its producers that it has a beneficial effect in cases of filariasis (*F. bancrofti* infection), and the hope that it would prove as effectual in this sphere as Bayer "205" in trypanosomiasis has yet to be demonstrated. The improvement noticed in the patient's general condition was observed before the test was commenced and was probably due to the diet, rest, and care received in hospital.

SUGGESTIONS ON THE ÆTIOLOGY OF HYPERTROPHY OF THE TONSILS.

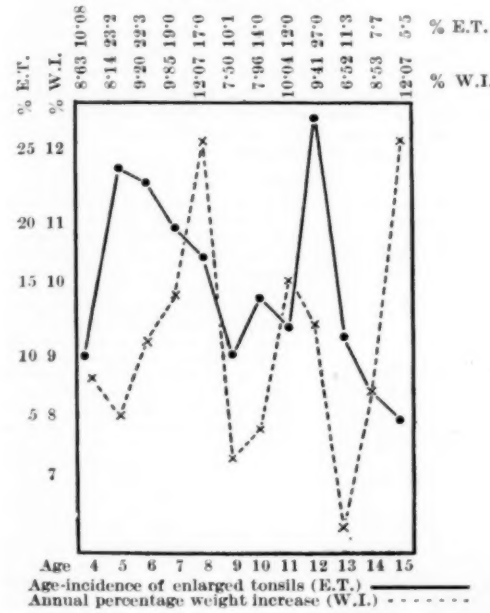
By H. LESLIE CRONK, M.D., D.P.H. CAMB.,
ASSISTANT SCHOOL MEDICAL OFFICER, CORNWALL.

Henoch,[1] in 1889, recognised that the cause of hypertrophy of the tonsil in children was obscure. He says: "As the result of the frequent occurrence of these attacks of inflammation, the tonsils may in time become hypertrophied. As a rule, however, I have seen this hypertrophy in children who had not suffered at all, or, at least, very seldom, from sore-throat. I have also been able to ascertain by definite symptoms the presence of scrofula as a predisposing cause only in a few of the cases, although its presence is often assumed without sufficient reason." Garrod, Thursfield, and Batten[2] state that the cause of enlargement of the tonsil is the same as that of adenoids; with regard to the latter they say: "At present the trend of opinion is in favour of the hypothesis that the enlargement of the lymphoid follicles of the naso-pharynx is a response to infection." Medical opinion has thus not progressed very far in this matter since Henoch wrote.

This view of the inflammatory origin of the enlargement of the tonsils and adenoids has, in my opinion, been the cause of many needless operations. Lately there has been some reaction from the view that hypertrophy was sufficient reason for enucleation of the tonsil; it has been pointed out that the tonsil

has, in all probability, some function, although obscure, in the bodily economy, and also that hypertrophy is not an unequivocal sign of disease. The attitude of hostility towards the tonsil, now happily lessening, has, I think, its origin in a limited conception of its functions, which, from its structure and its situation, appear to be those of a lymphatic gland so situated that it may entrap organisms in

DIAGRAM 1.—BOYS.



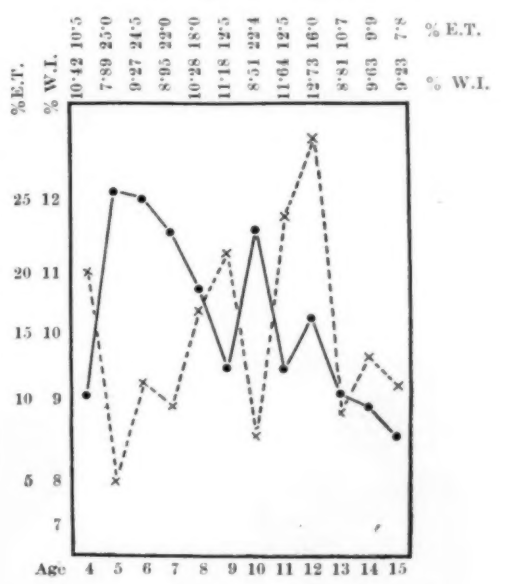
the oral cavity. It has been forgotten that to do its duty it has not only to destroy organisms, and so aid in producing immunising bodies, but also to keep up the supply of lymphocytes in the blood. It is in this last, so obvious but so neglected, function that the reason for hypertrophy lies.

In examining school-children I have repeatedly noticed that enlarged tonsils are more common at some ages than at others, and that many children with such enlargement are the picture of health, and are even better nourished than the average child. Such children frequently show no pathological enlargement of the tonsillar lymphatic glands, and in their mouths and history present no cause for hypertrophy on the infection theory. Other children again, equally fat and healthy, will show evidence of glandular enlargement elsewhere without hypertrophy of the tonsil. These cases seem to me to be parallel to one another, the only difference being in the situation of the lymphatic tissue which becomes hypertrophied.

Hypertrophy of the tonsil has been shown to be due to excessive formation of lymphocytes in the organ, and the point at issue is the reason for the increased supply of these cells. They are not phagocytes, and the theory that they produce an antibacterial substance or antitoxin has no experimental evidence in its favour. Our knowledge of the function of these cells is not complete, but from recent researches by Cramer [3] and others it appears that they are of great importance in nutrition. Cramer holds that lack of vitamin B causes its symptoms of inanition by its atrophic action on the lymphoid tissue of the intestine, while Carrell [4] has shown that fixed tissue cells cannot absorb nutriment for their growth unless lymphocytes are present so to alter the substances carried by the serum that they can be utilised by the tissues. If this is true, in periods of growth, lymphocytes must be in abundance, and for their production lymphatic tissue must proliferate.

Now growth is not a linear function of age, but takes place more rapidly at some ages than at others. Again, the presence of tonsillar hypertrophy is also not a linear function of age. The growth-rate [5] at various ages from 3 to 15 years has been charted in the accompanying diagrams, on which is also represented the age-incidence of hypertrophy of the tonsil. [6] From these diagrams it is seen that the two

DIAGRAM 2.—GIRLS.



main maxima of increase of weight occur two to three years after a maximal incidence of tonsil hypertrophy; this occurs in both sexes, although the curves of growth are not identical.

When the rise of tonsil incidence is small (as at 10 years of age in boys and 12 years in girls) it is followed by a small rise in weight increase at a short interval; when the rise is greater (as at 10 years of age in girls and 12 in boys) so is the rise in weight increase higher and the interval longer. There seems more than mere coincidence in this, and the suggestion is obvious that increase of lymphoid tissue is a necessary preliminary to growth in weight, and that the tonsils in this matter hypertrophy simply in order to take their share in the production of lymphocytes and not as a result of infection. If excised they will always show the presence of organisms in the crypts, but so will any tonsil after the first few days of life, and such invasion does not constitute infection. Growth is a primitive function and is correlated with the primitive function of the tonsil, which is that of a producer of lymphocytes. I do not say that many hypertrophied tonsils are not diseased; it would be reasonable even to suppose that rapidly growing organs should be more susceptible to bacterial attack, but I believe that all are not diseased. If this is admitted the cause of the hypertrophy must be sought elsewhere, and the evidence points to some connexion with the influences, at present obscure, determining the periodic spurts in the formation of new tissue.

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Clinical and Laboratory Notes.

A CASE OF AORTIC ANEURYSM.

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THE photographs which accompany this note illustrate a very remarkable case which came under my notice in the Ipoh Hospital, Perak.

The patient was a very debilitated Chinaman, who furnished a history of a gradually enlarging tumour with considerable pain. There was also a very definite history of long-standing and untreated syphilis. The Wassermann blood-test was positive, and there was marked evidence of atheroma. The enormous tumour showed marked expansile pulsation, on auscultation over it a very loud bruit was audible, and puncture with a needle proved the sac to contain blood. On these findings the diagnosis, which was confirmed post mortem, was made.

FIG. 1.

FIG. 2.

Reproductions of photographs of a case of aortic aneurysm, showing dorsal view and lateral view of tumour.

Aneurysm is quite a common disease among the Chinese mining coolies, the vast majority of whom suffer from untreated syphilis. Their avocation, which entails the carrying of heavy burdens, is no doubt an important contributory cause of aneurysm. I have seen and operated on many such cases. A remarkable case of the kind operated on by me in Kuala Lumpur in 1917 was that of an enormous aneurysm of the left common carotid. I tied the artery at the arch of the aorta by opening up the anterior mediastinum. The patient survived for eight days, but died from œdema of the brain.

A CASE OF UVEO-PAROTITIC PARALYSIS.

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AND
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THE syndrome iridocyclitis-parotitis-polyneuritis is sufficiently rare to justify the publication of another case. The recognition of this disease is attributed to Heerfordt,[1] and other cases have been recorded by Mackay,[2] Feiling and Viner, Daireaux and Pechin, Brewerton and Dopter.[3] The name "Uveo-parotitic paralysis" we owe to Macbride,[4] who published a very complete account of one case.

Clinical Note.

The present case occurred in a married woman of 51, who was admitted to Southmead Hospital, March 18th last, complaining of arthritis of her knees and intense dryness of the mouth. Two years ago the right side of the face began to swell but caused her no pain. Dryness of the mouth appeared and became much worse three months later, when the left side commenced to swell. For the past six months she has suffered from soreness of her eyes, photophobia, lacrymation, and mistiness of vision. She has lost weight during the past two years. Her previous illnesses included an operation for vaginal hæmorrhage performed when she was 25, in which both ovaries were removed. She had a "nervous breakdown" in 1921. Her family history revealed nothing of importance except that a sister died of diabetes and a brother of phthisis. Patient was a thin, anæmic woman, looking older than her age. Her face was somewhat asymmetrical and there was marked ptosis with some marginal blepharitis. There was no mental or temperamental abnormality.

Cranial Nerves.—The fields of vision were full, but corneal opacities did not permit of a thorough ophthalmoscopic examination. The pupils were small and equal: circular in shape, central in position, but there was some slight irregularity in the edges. Reaction to light was sluggish, and there was no reaction on accommodation. The eye movements were normal; ptosis was present, especially in the right eye. Jaw movements and facial sensibility were normal. There was some facial asymmetry, the left naso-labial fold being more prominent than the right. Voluntary and emotional movements were full and equal. Taste was unimpaired. Hearing was somewhat poor, bone conduction being better than air. Weber's test was normal. There was no tinnitus. Patient complained of some dysphagia. The eleventh and twelfth nerves were normal.

Motor System.—The musculature was everywhere poorly developed, and there was distinct atrophy, localised to the interossei, the dorsal thumb muscles, and the flexor brevis pollicis on both sides. No fibrillation was noted. Motor power was feeble in the hands and extensors of the elbows. Tone was normal; coördination good. No involuntary

[1] Heerfordt, C. F.: Archiv für Ophthal., 1909, lxx., 254.
[2] Mackay, G.: Trans. Ophthal. Soc., 1917, xxxvii., 208.
[3] Dopter: Gaz. des hôp., 1904, lxxvii., 857.
[4] Macbride, H. J.: Jour. Neurol. and Psychopathol., 1923, vi., 242.

movements. In the legs all movements were present but somewhat feeble.

Sensory System.—Responses to light touch, pin-prick, heat and cold, passive movements and alterations in position were everywhere normal. There was no appreciation, however, of a vibrating tuning-fork applied to the ankles.

Reflexes.—All tendon-jerks were present. No abdominal reflexes were obtained; plantar stimulation evoked a flexor response.

Trophic.—There was an operation scar over the abdomen and a mark due to an old electric-battery burn. The knees showed some arthritic changes. No cutaneous eruption was found.

Lungs.—At both apices the breath sounds were harsh and vocal resonance was increased.

Parotid.—There was a visible enlargement of both parotid glands, especially the right, involving all lobes. They were hard, non-fluctuating, and painless on palpation. The overlying skin was not involved. No other lymphatic or salivary glands were enlarged. Spleen and liver were not palpable.

Eyes.—Both eyes, especially the right, showed some mucopurulent conjunctival exudate. The irides were muddy and the pupillary margins a little irregular. Both corneæ were hazy. Pupillary reaction was lost on accommodation, and was sluggish to light. On dilating the pupils a circle of pigment was seen in both eyes on the anterior lens capsule at the site of former posterior synechiæ. Photophobia and blepharitis were present.

Teeth had all been extracted over three years ago.

Examination of a blood-film showed a normal leucocyte count, the red cells numbering 3,500,000. Wassermann reaction was negative in the serum.

Discussion.

It appears that the symptoms in uveo-parotitic paralysis may appear in any order; the facial muscles are the most usually affected, but in this case there was but little impairment of the seventh nerve. Dysphagia occurred in this case as in those reported by Macbride and Heerfordt, though this symptom might possibly be due to the dryness of the mouth. Macbride called attention to weekly bouts of pyrexia as in Hodgkin's disease: the present case showed a constant evening rise of temperature up to 100° to 100·5° F.

Points of special interest in this case are: (1) the preponderance of the right-sided manifestations; (2) the slight involvement of the cranial nerves and the mildness of all subjective phenomena; (3) the absence of any rash, as reported by Feiling, Viner, and Brewerton; (4) the association of uveo-parotitic paralysis with absence of the ovaries.

The nature of this disease is almost certainly that of a chronic infection, although the exact ætiology is unknown. Syphilis appears to take no part in the pathogenesis, neither does the previous occurrence of mumps. In our case the pulmonary signs, the pyrexia, and the family history suggest that tubercle might be the causative agent, but the coexistence of a septic arthritis rather obscures the picture.

Medical Societies.

MEDICO-LEGAL SOCIETY.

A MEETING of this Society was held at 11, Chandos-street, in the rooms of the Medical Society of London, on Oct. 21st, Lord Justice ATKIN, the President, being in the chair.

Prof. HARVEY LITTLEJOHN read a communication on

Judicial Hanging as a Humane Method of Execution.

He said that he had recently been able to examine fully six cases of execution, and he thought that the details were of enough scientific interest to be worth recording. He then described in detail the procedure adopted and the post-mortem findings in these cases. The drop used varied from 6 feet to 7½ feet, and in every case death appeared to be instantaneous. In five cases no movements at all were perceptible; in one case a few convulsive movements of the shoulders were seen. In most cases the heart continued to beat vigorously for about 10 minutes, giving a strong radial pulse of 80–150 beats per minute at first, but later becoming irregular and stopping altogether after 15 to 20 minutes. In one case the heart appeared to stop immediately. The bodies were allowed to hang for one hour before being taken down. Post-mortem examination showed considerable injury to the muscles of the neck, and in five cases dislocation of the spinal column by separation between the second and third cervical vertebræ. In one case the body of the third vertebra was fractured and dislocation occurred lower down. In some cases the spinal cord and membranes were torn across; in others they appeared intact. After reference to the older and less humane method of hanging by strangulation without a drop, and to the methods used in other countries, Prof. Littlejohn concluded by saying that in his opinion the modern method used in this country was the most humane of all. It was performed very expeditiously (the whole proceedings only taking a few seconds), was painless, and undoubtedly caused instant death.

Sir BERNARD SPILSBURY described a recent case of judicial hanging in which the post-mortem findings closely resembled those described by Prof. Littlejohn except that the spinal column was dislocated between the sixth and seventh cervical vertebræ, as well as between the second and third. The second dislocation might have occurred on a rebound from the first drop. Death appeared to be instantaneous.

Sir WILLIAM WILLCOX agreed with Prof. Littlejohn that judicial hanging was a painless form of death and that the victim immediately became quite unconscious even if convulsive movements were shown. He considered it the best method of execution, and more reliable than electrocution.

Earl RUSSELL considered that a better method, giving less unpleasant anticipation for the victim, and a less disagreeable spectacle for the onlookers, would be the introduction of coal gas into the prisoner's cell at night during sleep. This would be painless and not disagreeable.

Dr. G. ROCHE LYNCH said he thought it unwise to leave the decision as to the length of drop needed to the executioner.

Dr. JAMES SCOTT said that he had seen many executions, and fully agreed with Prof. Littlejohn that hanging was a quick and sure method of execution with no evidence of suffering. The length of drop was now regulated according to tables drawn up by a committee which had investigated the subject. He considered the methods used in other countries less satisfactory.

The PRESIDENT closed the discussion by remarking that he thought it most important that the public should feel assured that judicial hanging was painless, and that complete unconsciousness, if not death itself, was instantaneous. He thought that provision by the authorities for post-mortem examination by competent persons, with publication of the results, would allay a good deal of public unrest. He considered Lord Russell's proposal objectionable, because if the prisoner did not know on which night he was to be poisoned he would lie awake many nights expecting death. If, however, he was forewarned, he would certainly not sleep on the given night, but would be slowly suffocated while conscious.

Prof. LITTLEJOHN, in reply to a question, said that even the thickest neck could be overcome by suitably lengthening the drop, and that, as carried out nowadays, no accidents occurred.

Prof. LITTLEJOHN then read a paper entitled

What is a Fatal Dose of Strychnine?

describing cases of fatal poisoning from known small doses of strychnine.

CASE I.—A woman of 25 swallowed a powder containing 1 gr. of strychnine. This powder had been dispensed by a chemist who kept his strychnine bottle next a bottle of exalgin and had used strychnine in mistake for exalgin.

The powder was swallowed with water. After five minutes the patient felt sick and unwell, and was helped to bed. After 15 minutes she complained of pain at her heart, and passed into a general convulsion lasting one and a half minutes. She then expressed a fear of death, and 30 minutes after taking the powder died in a convulsion. Post mortem strychnine could be detected in the blood and in the stomach, but not in the stomach contents.

CASE 2.—A woman of 36 consulted a doctor, who prescribed for her a mixture of liq. arsenicalis ½ oz., and liq. strychninæ hydrochlorici ½ oz., of which six drops were to be taken thrice daily. The patient finished the liquid in the bottle without ill-effect, but later on, wanting a further dose, she noticed a white deposit in the bottle, added some water, and drank the contents. Two hours and 20 minutes later she died after several convulsions. On analysis the remaining contents of the bottle were found to contain 4 mg. of strychnine. The total amount originally present was $2^{1}/_{5}$ gr., but it is uncertain how much of this was swallowed in the fatal dose.

The case was an illustration of the danger of prescribing powerful drugs in drop form instead of in dilute solution, and also showed an inexcusable error of the prescriber, and especially of the chemist, in dispensing two incompatible drugs. It was well known that alkaloids are precipitated by alkalies from solutions of their salts, and in this case strychnine was precipitated from its hydrochloride solution by the alkaline liq. arsenicalis. When the patient added water and shook the bottle she formed a suspension of this precipitated strychnine which proved fatal.

CASE 3.—A naval officer of 25 wanted a "pick-me-up" and was given 1 drachm of liq. strychninæ hydrochlorici by a ship's doctor who misread the dose printed in his Pharmacopœia. After 20 minutes the officer laughingly complained, "That was strong stuff. I can't walk properly now." The doctor became suspicious, discovered his error, and gave the officer salt and water and tartar emetic, which produced some vomiting. In spite of this, and of artificial respiration, the officer died from respiratory failure three-quarters of an hour after taking the poison and after only one convulsion. One drachm of liq. strychninæ hydrochlorici contains 0·55 gr. of strychnine.

CASE 4.—A boy, aged 3½, was found playing with some tabloids of Easton's syrup. After an interval he had convulsive seizures and died on arrival at hospital not more than one and a half hours after taking the tabloids. As far as could be ascertained, he had taken two or possibly three tabloids, equal to a total of 1/32 or 1/20 gr. of strychnine.

CASE 5.—A child, 18 months old, was found eating laxative pills which the mother kept on a table at her bedside. The child was thought to have eaten nine pills, each containing strychnine gr 1/60, belladonna gr. 1/8, and aloin gr. 1/5. Convulsions began within 15 minutes, and in spite of medical treatment by 1/20 gr. apomorphine and later chloroform, death occurred 2 hours 20 minutes after taking the pills. Nine pills would contain 1/7 gr. of strychnine.

Prof. Littlejohn pointed out that in the recorded cases of strychnine poisoning the fatal dose varied considerably according to the constitution of the individual and the circumstances of the administration. Recovery had been recorded from doses up to 40 gr., while, on the other hand, ½ gr. had been said to prove fatal to an adult. This latter case was admittedly uncertain, and the next smallest fatal dose recorded was ½ gr., which was said to have killed a Dr. Warner in 20 minutes. Here, again, the evidence as to dosage was by no means definite, but the case of the naval lieutenant recorded above (0·55 gr.) afforded definite corroboration of the fatal dose of ½ to 2 gr. usually given in books. Apart from the question of fatal dose these cases provided striking illustrations of ways in which accidental strychnine poisoning might occur, and of the care needed in prescribing the drug, or allowing it to come within the reach of children.

Sir WILLIAM WILLCOX pointed out that strychnine was one of the most stable of poisonous alkaloids, and mentioned that in the viscera of a fox poisoned 20 years ago and since kept in his laboratory, strychnine could still be detected with ease. The fatal dose of snrychnine appeared to be proportional to body-weight atd hence doses which were medicinal for an adult might be fatal to a child. Both the speed of action and the fatal dose probably depended on the method of administration, solutions being quicker and more deadly than the solid form, since their absorption was more rapid and the toxic effects were probably proportional to the concentration in the blood at any instant. Idiosyncrasy undoubtedly occurred with this drug, and he had seen cases in which adults taking 1 drachm of Easton's syrup as a tonic ($^{1}/_{32}$ gr. strychnine) three times a day suffered from spasms in the legs and other symptoms, and were really on the verge of poisoning. Dixon Mann had stated that if excretion in the urine was slow toxic effects were more marked, and Sir William Willcox thought that in such cases the fatal dose might be considerably less than ½ gr., especially if taken in solution on an empty stomach.

Dr. C. OWEN FOWLER pointed out a possible danger in the dispensing of strychnine due to its tendency to crystallise out round the stoppers of bottles. Such crystals falling off as the solution was poured out might easily lead to excess of the drug in a prescription.

Mr. JOHN WEBSTER quoted a case of tolerance to the drug in which a woman took increasing doses of strychnine for two years before her death. In the last few weeks these doses rose to from $^{1}/_{10}$ to $^{2}/_{3}$ gr. per day without the appearance of symptoms, perhaps partly owing to the presence of paraldehyde in the prescription. Post-mortem analysis showed only very faint traces of strychnine in the liver and stomach, too small to estimate, although the large doses were taken up to death.

Dr. W. B. PURCHASE pointed out that in calculating fatal doses allowance should be made for such amount of the poison as was vomited, and asked if these amounts had been subtracted in the cases quoted.

The PRESIDENT emphasised the importance of the question from a medico-legal point of view, and pointed out that the discovery that ½ gr. had killed one adult did not prove that a similar dose would kill any given individual, and did not necessarily show the minimum fatal dose or the maximum dose that could be tolerated. Owing to the importance of tolerance as well as idiosyncrasy great accuracy was needed in discussing the subject, and all light on it was helpful.

Prof. LITTLEJOHN, in reply, said that idiosyncrasy was unquestionably shown with all drugs. For instance, with strychnine paralysed persons might need very large doses. Hence the individual must always be considered. Tolerance, however, was a different question, and, in his opinion, no habit tolerance could be formed to strychnine, however much was taken. In answer to the constant question, What is the fatal dose of strychnine? we now had a really authentic record of ½ gr. causing death in a healthy adult.

LIVERPOOL MEDICAL INSTITUTION.

Encephalitis Lethargica.

A MEETING was held on Oct. 23rd, when Dr. GORDON GULLAN read a paper on a Clinical Study of 62 Cases of Encephalitis Lethargica. He began with a historical note of the disease, and described various types and cases. Onset, special symptoms, and syndromes, results with sequelæ, diagnosis, prognosis, and treatment were also set forth.

Dr. HENRY COHEN expressed surprise that pain was present in only one of the 62 cases. In his experience, severe pain, probably of thalamic origin, was not uncommon. Pain frequently preceded the onset of myoclonus and had been mistaken for an acute abdominal lesion in some recorded cases. Extensive classification was to be deprecated owing to the innumerable varieties encountered. Walsh's classification, in which the symptoms and signs were regarded as (*a*) evidence of general infection and toxæmia, (*b*) evidence of exaltation and depression of the nervous system, either general or local, was suitable except that

thereby the common manifestations—for example, the oculo-lethargic and the myoclonic types—might be insufficiently emphasised. In the differential diagnosis meningitis—tuberculous and syphilitic—could in the majority of cases be excluded by examination of the cerebro-spinal fluid. Difficulty in diagnosis occasionally occurred in cases of (i.) sinusitis, especially frontal sinusitis associated with brain abscess, (ii.) infective endocarditis of the cerebral type, (iii.) uræmia especially associated with myoclonus, and (iv.) post-diphtheritic paralysis. Papilloedema was so rare as to suggest intracranial neoplasm or abscess, though undoubted fundus change occurred in epidemic encephalitis—slight in degree and rarely. Dr. Cohen considered that the figure given by Dr. Gullan for complete recovery (50 per cent.) was too high. Treatment of the sequelæ was disappointing, though hyoscine hydrobromide in the Parkinsonian syndrome, luminal in the myoclonic types with pain, and Lust's treatment in cases presenting reversal of sleep rhythm were useful in many cases. Pitcairn's method and magnesium sulphate injections were disappointing.

Mr. C. O. DAVIES read a note on Pharyngeal Diverticula with an account of two cases recently treated at the Liverpool Royal Infirmary.

CARDIFF MEDICAL SOCIETY.

A MEETING of this Society was held on Oct. 15th, when Dr. R. M. F. PICKEN, M.O.H., Cardiff, spoke on

Present-day Health Tendencies in Cardiff.

After referring to the importance of the medical profession reviewing locally from time to time the results of public health activities, Dr. Picken emphasised the important use of the statistical method of inquiry and dealt with the absence of reliable local statistics of sickness, as a result of which information in the mass was available only through death returns. The death-rate in Cardiff had fallen more rapidly than in England and Wales generally since 1851, and at the present time Cardiff was favourably placed in relation to the acute infectious diseases. So far as infant mortality was concerned, there had been a satisfactory decline which was shared in almost equal degree by all the other towns of importance. Dr. Picken considered at some length the various explanations which had been given for this decline, and mentioned that in his opinion the continuous fall in the birth-rate was probably the most important factor. Examples were given of towns where there did not appear to be any definite correlation between a low birth-rate and a low infant mortality, but in places like Bradford and Huddersfield this might be due to special circumstances affecting the employment of married women. The fact that the decline of the infant mortality commenced 25 years after the commencement of the fall in the birth-rate was not necessarily an argument against the former being the result of the latter. The problem of tuberculosis was dealt with at some length, and it was shown that in Cardiff the death-rate from pulmonary tuberculosis, more particularly among males, was actually increasing. Various possible reasons for this were considered, and it was shown that the cause could not be found either in excessive unemployment as compared with other places or in the foreign seafaring population, who admittedly suffered heavily from tuberculosis, or in the migration of the population in such way as to increase the number of susceptible persons in the city. The problem remained unsolved. Having dealt briefly with the increase of cancer and the tendency for the male cancer mortality to equal the female cancer mortality-rate, some practical questions affecting the administration of public health and hospitals in Cardiff were discussed, and a plea was made for better local sickness statistics and greater use of the general practitioners' opportunities for gathering and pooling information which might solve some of the problems touched upon.

LUNACY LAW AND ADMINISTRATION.

OPENING SITTINGS OF THE ROYAL COMMISSION.

THE first meeting of the Royal Commission on Lunacy Law and Administration and Mental Disorder was held at Old Palace Yard on Tuesday, Oct. 7th. Mr. H. P. Macmillan, K.C., presided.

EVIDENCE OF THE BOARD OF CONTROL.

Sir Frederick Willis, chairman of the Board of Control; Mr. S. J. Fraser Macleod, K.C., and Dr. C. Hubert Bond, Commissioners of the Board, were the first witnesses.

Development and Duties of the Board.

Sir F. Willis said that the Board really had its inception in 1845. It was to consist of three legal members and three medical members. He attributed the state of efficiency in asylums to-day in a large measure to the work of the Board, although, of course, there had been also the growth of a right spirit all through the lunacy system. He spoke of the enlargement of the duties of the Board consequent upon the passing of the Mental Deficiency Act, 1913.

The Chairman said that the class of persons to whom the Mental Deficiency Act related were different from those with whom the Commission was concerned in that inquiry. That Act had created a separate code from the code of lunacy law and administration—a code with which that particular inquiry had nothing to do. He added that he was anxious to appreciate the principles upon which this branch of law had developed. It appeared to him to be a compromise between the liberty of the individual on the one hand and the protection of the public against abnormal individuals on the other, together with the protection of the individual himself against the consequences of his abnormality.

Sir F. Willis agreed, and said that nowadays we looked to the cure of the individual.

The Chairman said that the medical side had shown a progressive effort to improve the conditions under which those of unsound mind were treated and to aid their recovery. He asked if he might take it that the main sources of the existing law were to be found in the Lunacy Acts of 1890–91, with certain amending statutes, and asked also what other bodies or persons were concerned, in addition to the Board of Control, with persons of unsound mind.

Sir F. Willis said that the Lord Chancellor had an ancient jurisdiction which related to the person as well as to the property. Largely his powers were derived from common law. The Home Secretary, of course, had jurisdiction over criminal lunatics. The Ministry of Health had jurisdiction, not over buildings, but over persons.

The Chairman asked whether any disadvantage had arisen from the distribution of functions among these different bodies.

Sir F. Willis thought it desirable that the Board of Control should be able to go to the Minister of Health just in the same way as the Ministry of Health as a department went to the Minister. He agreed that the number of persons found insane by inquisition with whom the Lord Chancellor had to do was decreasing, and that it was a reasonable inference to draw that inquisition is less necessary now than formerly.

Sir F. Willis considered that the present method of dealing with lunatics adequately met the public interest. The categories of patients with whom the Board of Control had to deal were mainly (1) private and (2) rate-aided. In the case of a pauper the justice making the order for detention was required to see the patient. In a private case he need not do so. The places where the insane were dealt with included county and borough mental hospitals (80 per cent.); registered hospitals, where fees are charged, but not with the object of making a profit; licensed houses or private asylums, which are run

for profit; naval and military hospitals; criminal lunatic asylums, Poor-law institutions; private single care, and outdoor relief. On Jan. 1st, 1924, there were in the county and borough mental hospitals 103,892 patients (45,897 males and 57,995 females); in registered hospitals, 2139; in metropolitan licensed houses, 1187; in provincial licensed houses, 1610; in naval and military hospitals, 171; in criminal lunatic asylums, 785; in Poor-law institutions, 11,323; in metropolitan hospitals provided by the M.A.B., 5266; in private single care, 417, and insane people receiving outdoor relief, 3544, making a total of 130,334. Boarded-out cases are included in the first category, because they remain on the books of asylums. With regard to licensed houses, Parliament had enacted that the number of these institutions should not exceed the number in existence in 1890. There were now 98 such institutions, including Maudsley, and there were 13 registered hospitals.

Various Safeguards.

Mr. Macleod then described the procedure of petition, and the difference of procedure in the case of a private and of a rate-aided patient. The documents relating to any patient on reaching the Board of Control were carefully scrutinised by an experienced clerk and later by a Commissioner. If they were wanting in any particular they were sent back, and if they could not be amended the order fell to the ground. There was no distinction so far as the Board's scrutiny was concerned between documents relating to private and those relating to rate-aided patients. Perhaps about 12 or 20 certificates a day were referred by the clerk to the secretary for scrutiny, though mostly on technicalities.

Dr. Bond said that it was not always possible to gather from the certificates whether the symptoms there set down were observed by the certifying doctor himself at the time of the examination, and sometimes the facts given did not necessarily indicate unsoundness of mind. The scrutiny of the Board was directed to the whole certificate, but the accent was on the paragraph relating to what was seen by the observer at the time of the examination. The forms were not always examined by a medical Commissioner, but if any purely medical point arose the legal Commissioner would call the attention of his medical colleague to it. He thought that the form could be said definitely to be successful. Doctors did not always grasp the essentials of this certification, but education in this respect was going ahead, especially since some of the medical bodies had established diplomas in psychological medicine. After admission of the patient a description of his mental and bodily condition was furnished to the Board by the medical superintendent within seven days. This was not a diagnosis, but simply a description. The reason for the differentiation between private and rate-aided patients was that in the case of the rate-aided patient, unlike, in some cases, the private patient, it was to no one's interest that he should be unnecessarily detained.

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The Chairman remarked that there were differences in the procedure of discharge between private and rate-aided patients, and he supposed that here again the reason was that there was no pecuniary inducement on the part of any person to retain the rate-aided patient in an institution.

Dr. Bond remarked, on the subject of medical examinations, that it was a growing practice—and in one hospital the routine practice—for the medical superintendent, on the admission of a patient, to discover the name of his family doctor, if there was one, and inform him briefly as to the facts of detention and invite him, if in the neighbourhood of the asylum, to come in and discuss the case.

Sir F. Willis said that the number of patients sent out on trial in 1922–23 from borough and county asylums was 5525, but a large number had to return to the institutions. On the question of accommodation he expressed the view that mental hospital accommodation was inadequate, and that in a short while the position would be serious, owing, not to any undue increase of insanity, but to the natural growth of population.

The Chairman thought it might be necessary to reconsider the policy which since 1890 had arrested the growth of the licensed house.

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The next question raised was on the provision for insane patients in workhouses. The Chairman said that the workhouse was not the proper place for the reception of patients likely to improve under treatment; if used at all it should be for chronic and hopeless cases.

Sir F. Willis said that his Board would welcome any practicable suggestion for the better use of the total accommodation.

Steps Following the Arrival of the Patient at an Institution.

Dr. Bond, at the request of one of the Commissioners, then detailed how a patient was dealt with on arrival at an institution. A preliminary physical examination was made while the persons who had brought the patient remained on the premises. The patient was put to bed for at least a week, during which time an elaborate examination was made by more than one doctor, and a report sent to the Board of Control. The examination was repeated at monthly intervals, certainly for the first three months, and probably for the first year, and later at quarterly intervals.

Sir Humphry Rolleston asked how often it happened that the second certificate, the first having been given by the family doctor, was given by an expert in mental disorder.

Dr. Bond said that in the metropolis this was very frequent, less so in other parts of the country. Dr. Bond also stated that faulty certificates were extremely few in number compared with the hundreds of thousands of proper certificates which came before the Board.

Sir David Drummond raised the question of the clinical experience of medical officers at mental hospitals, and asked whether it was necessary for such officers to have had a training in a general hospital.

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Mental hospital authorities had also been urged to appoint, in addition to their resident staff, certain consulting physicians other than mental specialists —i.e., gynæcologists, and so forth. He doubted, however, whether it would be practicable to lay down a hard-and-fast requirement for clinical experience; visiting committees even as it was did not get sufficient applications when there was a vacancy.

Allegations of Cruelty.

The Secretary of the National Society for Lunacy Reform asked permission to put certain questions, and these were put through the Chairman. The first question was how frequently the Board had to investigate cases of cruelty.

Sir F. Willis said that the Board received a great many complaints of cruelty, chiefly from the patients themselves, in the form of letters. Every case was investigated, if necessary by a sworn inquiry, but in very few instances was the complaint substantiated. In one case only in 1923 an attendant was prosecuted and fined for striking a patient, and there were very few cases, not more than half a dozen a year, in which complaints were found proved and disciplinary action other than prosecution taken. The right of an ill-treated patient to appeal to his doctor was very jealously safeguarded, and in addition to this, the patient could always write to the Board, and, as he had said, every case was investigated. He had heard it stated that some patients were too frightened to complain, but he had not known this to be substantiated. He thought that the surprise visits of the Commissioners did much to allay any uneasiness on this score, for it occasionally happened that the Commissioners on going round the wards were apprised of some case, and held an inquiry forthwith, sometimes on oath.

In answer to a question from the Chairman, Sir F. Willis said that the licensee made the appointment of heads of licensed houses; the licensee need not be a doctor, but the Act required that there must be a resident doctor, and a visiting doctor according to the number of patients. Asked whether he had any statistics of the number of persons who have been discharged from detention on the ground that they were not insane when admitted, he answered: "A very small number." He had had no experience of cases where persons not insane had been wrongly detained in asylums, and he regarded the existing machinery in the matter of certification and provisions with regard to detention as adequately safeguarding the liberty of the subject. On the other hand, if ingenuity could suggest any additional reasonable precautions the Board would not resent them. With regard to curative treatment in the hospitals themselves, the Board had responsibility only in an advisory capacity. The responsibility for the treatment of each individual case must rest with the doctor of the institution. If the Board found an institution lax in this matter they could bring pressure to bear on the medical superintendent or the local authority, but they could not insist that an extra doctor be appointed or a laboratory provided.

EVIDENCE OF THE LORD CHANCELLOR'S DEPARTMENT.

Sir Claud Schuster, Permanent Secretary to the Lord Chancellor, gave evidence with regard to the small number of patients in whom the Lord Chancellor had an interest. These were patients found insane by inquisition—a very small number—and those in whose property the Lord Chancellor had some concern. The Lord Chancellor's visitors were three in number—two medical and one legal—and they visited these lunatics at statutory intervals. Their concern was with the individuals, not with the institutions. Asked whether the Lord Chancellor's ancient jurisdiction was worth retaining, the witness said he was in doubt on that point; it depended on the constitution of the Board of Control, which should include the very highest medical experts on the subject of lunacy, as well as legal men of great eminence. The legal mind was needed to counterbalance the special point of view of the medical. On the whole, he thought that it was as well to continue the Lord Chancellor's functions, which were to some degree those of a champion of these people. He went on to complain of medical certificates, not as to their conclusion, but as to their selection and arrangement of facts leading up to those conclusions, and said that here again the legal mind was necessary to correct and counterbalance the medical.

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At the resumed sitting on Oct. 21st Sir Claud Schuster, under the same chairmanship, expanded a reply he gave at the previous sitting when he expressed the view that a lunatic in confinement had not been and should not be given the right to demand a public inquiry as to whether he had recovered. The conferment of such a right would be unfortunate. Lunacy was a disease which might or might not be curable, and, like other diseases, its cure or alleviation was a gradual process. It would, therefore, be very difficult in many cases to determine the point at which the patient might be said to have been cured or to have made such progress as to be properly released, and this would be a matter peculiarly unsuited for public inquiry. Moreover, as the function of those who had to determine whether the patient was to be released or further detained was not to investigate any charge against the patient as though he were an alleged criminal, but whether certain action should be taken in his interests and those of the public, the matter was unsuitable for forensic treatment, and it would be very undesirable that the local authority or the person in charge of the asylum should be forced into an office analogous to that of prosecutor. Again, a very large proportion of lunatics considered that they were wrongfully detained, and every one of these people would have the right to demand an inquiry and many of them would exercise it. The question of a lunatic's condition was unsuitable for discussion in public—often unpleasant and sometimes humiliating for the patient and detrimental to his interests.

EVIDENCE OF THE MINISTRY OF HEALTH.

Mr. L. G. Brock, Assistant Secretary to the Ministry of Health, next gave evidence. He said that the powers of the Local Government Board were transferred to the Ministry of Health under the statute which set up the Ministry, while certain powers of the Home Office relating to lunacy and mental deficiency were also transferred from time to time by Order in Council. The powers and duties entrusted to the Minister might be grouped under four heads: (1) The Minister had certain limited powers with regard to the individual lunatic. He had no power to order the discharge of a patient, but he could initiate inquiries on complaint. (2) He was called upon to approve the provisions made by local authorities for the accommodation of lunatics. (3) He had certain powers in relation to the Board of Control. He had power to recommend for appointment the non-legal Commissioners, and to approve other (staff) appointments. He was also responsible for the Board's estimates in Parliament. But, apart from these ultimate sanctions, the Minister had no power to give directions to the Board for any specific administrative act, though, as a matter of practice, the Board invariably met the Minister's wishes. In the daily administrative work of the Lunacy division of the Ministry all patients' letters were carefully read by the responsible officer, and, whenever necessary, the Board of Control was consulted regarding the latest medical report on the patient's condition. There were, of course, a number of chronic patients who wrote regularly, but whose mental condition was fully known to the department, and in other cases the letters bore on the face of them unmistakable evidence of insanity; for example, correspondents frequently complained of being "poisoned by wireless." All letters were carefully examined with a view to seeing if there was any allegation of wrongful detention or ill-treatment. Where the Board of Control had not available a special report from the medical superin-

for profit; naval and military hospitals; criminal lunatic asylums, Poor-law institutions; private single care, and outdoor relief. On Jan. 1st, 1924, there were in the county and borough mental hospitals 103,892 patients (45,897 males and 57,995 females); in registered hospitals, 2139; in metropolitan licensed houses, 1187; in provincial licensed houses, 1610; in naval and military hospitals, 171; in criminal lunatic asylums, 785; in Poor-law institutions, 11,323; in metropolitan hospitals provided by the M.A.B., 5266; in private single care, 417, and insane people receiving outdoor relief, 3544, making a total of 130,334. Boarded-out cases are included in the first category, because they remain on the books of asylums. With regard to licensed houses, Parliament had enacted that the number of these institutions should not exceed the number in existence in 1890. There were now 98 such institutions, including Maudsley, and there were 13 registered hospitals.

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At the resumed sitting on Oct. 21st Sir Claud Schuster, under the same chairmanship, expanded a reply he gave at the previous sitting when he expressed the view that a lunatic in confinement had not been and should not be given the right to demand a public inquiry as to whether he had recovered. The conferment of such a right would be unfortunate. Lunacy was a disease which might or might not be curable, and, like other diseases, its cure or alleviation was a gradual process. It would, therefore, be very difficult in many cases to determine the point at which the patient might be said to have been cured or to have made such progress as to be properly released, and this would be a matter peculiarly unsuited for public inquiry. Moreover, as the function of those who had to determine whether the patient was to be released or further detained was not to investigate any charge against the patient as though he were an alleged criminal, but whether certain action should be taken in his interests and those of the public, the matter was unsuitable for forensic treatment, and it would be very undesirable that the local authority or the person in charge of the asylum should be forced into an office analogous to that of prosecutor. Again, a very large proportion of lunatics considered that they were wrongfully detained, and every one of these people would have the right to demand an inquiry and many of them would exercise it. The question of a lunatic's condition was unsuitable for discussion in public—often unpleasant and sometimes humiliating for the patient and detrimental to his interests.

EVIDENCE OF THE MINISTRY OF HEALTH.

Mr. L. G. Brock, Assistant Secretary to the Ministry of Health, next gave evidence. He said that the powers of the Local Government Board were transferred to the Ministry of Health under the statute which set up the Ministry, while certain powers of the Home Office relating to lunacy and mental deficiency were also transferred from time to time by Order in Council. The powers and duties entrusted to the Minister might be grouped under four heads: (1) The Minister had certain limited powers with regard to the individual lunatic. He had no power to order the discharge of a patient, but he could initiate inquiries on complaint. (2) He was called upon to approve the provisions made by local authorities for the accommodation of lunatics. (3) He had certain powers in relation to the Board of Control. He had power to recommend for appointment the non-legal Commissioners, and to approve other (staff) appointments. He was also responsible for the Board's estimates in Parliament. But, apart from these ultimate sanctions, the Minister had no power to give directions to the Board for any specific administrative act, though, as a matter of practice, the Board invariably met the Minister's wishes. In the daily administrative work of the Lunacy division of the Ministry all patients' letters were carefully read by the responsible officer, and, whenever necessary, the Board of Control was consulted regarding the latest medical report on the patient's condition. There were, of course, a number of chronic patients who wrote regularly, but whose mental condition was fully known to the department, and in other cases the letters bore on the face of them unmistakable evidence of insanity; for example, correspondents frequently complained of being "poisoned by wireless." All letters were carefully examined with a view to seeing if there was any allegation of wrongful detention or ill-treatment. Where the Board of Control had not available a special report from the medical superin-

tendent on any such allegations, or where there was still room for doubt, the Minister asked that the Commissioners at their next visitation should pay special attention to the patient. If a case presented medical as distinct from psychiatric issues which called for investigation a medical officer of the Ministry would be sent to report on it. He added that the correspondence did not afford any evidence whatever of persons having been improperly certified or detained longer than the medical superintendent believed to be necessary, nor had any allegations of ill-treatment been fully substantiated. At the same time it was clear that there were a number of patients in mental hospitals who, though in no sense sane, could be discharged without danger to themselves or the community if their relatives were willing and able to look after them. The exact point at which a person suffering from mental disorder was sufficiently recovered to justify discharge was necessarily a matter of opinion; and some superintendents, mindful of the risk they incurred by recommending discharge prematurely, were more cautious than others. It was also remarkable that in many instances where the relatives were convinced that the case was one of improper detention, the medical report indicated a definitely bad prognosis. The explanation might be that in certain forms of insanity which were slow in development there were periods of quiescence, and as the relatives were only allowed to see the patients on good days they formed an incorrect impression of his mental condition. Other cases developed acute symptoms at an early stage, and, though the prognosis was hopeful, the relatives, having seen the patient violent or raving, had no doubt as to his insanity nor had they much hope of his recovery.

In reply to questions, Mr. Brock said that the Ministry had no alienist on its staff, though one member of the medical staff had had some experience in a mental hospital. He preferred not to answer a question as to the advantages of the Board of Control as a separate authority instead of a department in the Ministry, but he said that the relations between the medical Commissioners of the Board and the medical officers of the Ministry were based on mutual courtesy and administrative convenience, and the result was quite satisfactory.

Mr. H. W. S. Francis, Assistant Secretary of the Ministry of Health, in charge of the Poor-law Division, gave evidence dealing with the functions of the Ministry as the successor of the Local Government Board in dealing with the administration of Poor-law. The department kept closely in touch with the Poor-law authorities through a body of general inspectors, medical officers, and women inspectors. Every Poor-law institution was visited at least once a year. The general inspectors had statutory power to hold inquiries upon oath in matters of Poor-law administration. During the past five years such formal inquiries had been held in two cases in which persons of unsound mind were concerned. The number of insane persons who were inmates of Poor-law institutions, or institutions other than the public asylums, maintained wholly or partly at the cost of the poor-rate, was 27,432, of whom 8763 were inmates of Poor-law institutions provided solely for mental cases, and almost all the remainder were in the sick or other wards of Poor-law institutions. The witness was closely examined as to the procedure at inspections and inquiries, and in one case in which an inquiry as to the ill-treatment of a patient had led to no conclusive result the Chairman remarked that this did not seem very satisfactory.

PROPOSALS OF RELIEVING OFFICERS.

Mr. E. J. Lidbetter, President of the National Association of Relieving Officers, suggested certain proposals to the Commission. He recommended that there should be no difference in the process of certification between the pauper and the non-pauper; except in very rare cases, juveniles should not be certified as insane, nor should cases of senile dementia. The provisions of the Mental Deficiency Act should be amended to enable juvenile pauper cases to be dealt with under its provisions. The Board of Control, or some other authority or commission, should be endowed with powers to determine, under proper safeguards, ambiguities under the statutes and points of law involved. His principal recommendation, however, was that workhouses should no longer be regarded as places of safety for alleged lunatics; asylums committees should be required to provide sufficient reception houses in all urban areas. In such centres there would be sufficient cases to justify and require a rota of justices holding a daily session, and therefore there would be an end to the trouble which frequently at present arose, of securing a justice. The preliminary period of detention under this system need not be as long as three days. The work of such daily centres would be more formal and the investigation of cases would be carried out in a more judicial atmosphere than was possible in the wards of workhouses. There would be at the reception house a resident medical officer available for purposes both of treatment and observation. The reception house would also serve the purpose of a clinic, providing advice and treatment to out-patients. On the recommendation for the discharge of a patient from an institution for lunatics, the staff of the reception homes should be called upon to inquire into and report upon the conditions into which it was proposed to release the patient, and also to make some provision for after-care. The method would also make possible a system of information and record-keeping. In fact, there might be a cross-index containing particulars of every lunatic or alleged lunatic.

The Chairman thanked Mr. Lidbetter for his communication, and said that although the Commission was naturally anxious to do everything that was possible this procedure seemed likely to involve great expenditure.

EVIDENCE GIVEN BY MAGISTRATES.

The Commission sat for the fourth time on Oct. 22nd, under the same chairmanship, when evidence was given by magistrates as to the work done by them under the Lunacy Acts.

Sir John Barnsley, magistrate for the city of Birmingham and deputy chairman of the visiting justices of that city, placed before the Commission suggestions and recommendations made at a special meeting of the Birmingham justices. He said that as a rule he had no difficulty in signing a certificate for detention. He saw alleged lunatics either at his private residence or place of business, or, if they had been taken into custody, he saw them in a private room at the police station. It was no doubt the general practice to see a patient personally before signing a certificate, but it was recommended by the Birmingham justices that a personal interview should be compulsory. It was also recommended that where a doubt existed in the mind of the justice there should be, before final certification, compulsory preliminary observation in some place other than the workhouse or asylum, for instance, an observation clinic. The witness agreed with the Chairman that it should be a place to which there should be a right to send persons of any social position, whether they could pay or not, and that probably the additional expenditure involved might be set off against the saving from the diminution of the probable number of cases which would have to be sent to asylums. Charges might be made for treatment and the institution or clinic could serve as a centre for giving advice and assistance to outdoor cases. It should also be possible for patients to enter the institution voluntarily for a period of treatment without any detention order having been given. If such voluntary cases had dangerous tendencies, some form of compulsory detention would have to be adopted, and naturally such tendencies would be manifest prior to treatment. As to visitation, it was urged that some independent authority should, on

the lines provided under the Mental Deficiency Act, periodically visit and report upon all persons detained under the Lunacy Laws. All patients should be visited at the end of the first year, again at the end of the second year, and subsequently every five years. The rota for visitation under the Mental Deficiency Acts was so arranged that one magistrate saw the same person each year and could therefore note the progress that was being made. It would, of course, be necessary to enlarge the judicial authority and increase the number of visitors if that method was adopted.

The Chairman pointed out that the visit would be for the purpose of interviewing the patient who presumably thought he was being unlawfully detained. He had some difficulty in seeing how the visitor would decide that the case was one that ought to be liberated.

Sir John Barnsley replied that he did not suggest the visitor should have power to do anything more than report to the Commissioners that he had visited the case and in his opinion, as a layman, the patient might safely be discharged. It would then be for the Commissioners either to accept that view or to give reasons why it should not be given effect to.

Mr. W. H. Lord, magistrate for the city of Birmingham, was in accord with the views expressed by the previous witness as to observational treatment. His evidence was confined to the admission of patients; he said it was his practice to interview alleged lunatics in the cab in which they were brought to his house by the relieving officer. He had never had occasion to doubt the medical certificates submitted to him. It was proper, he thought, that relatives and friends should know that a certificate might be given in any particular case, though he did not make a practice of inquiring of the relieving officer if there were relatives, and why they were not present. He was of the opinion that it would be well to have a second certificate in pauper as well as in private cases.

Answering a question with regard to treatment, the witness said that in a large number of cases the proceedings and treatment were often too long delayed. He was under the impression that treatment prior to the stage at which certification could take place might prove to be remedial.

Sir Robert Walden, magistrate for the County of London, and chairman of the visiting magistrates for the county, agreed that personal contact was a great advantage, though it did not exist when private patients were admitted. He had had occasion to differ from medical men and had refused to sign certificates in certain cases, referring them back for further observation. He knew he had the right to call in another medical practitioner to inquire into such cases, but if they were difficult he would rather have the advice of an expert. With regard to provisional or experimental treatment, Sir Robert Walden was in favour of the establishment of a hostel under the management of an expert neurologist, assisted by trained nurses having psychological and other certificates, who should be able from time to time to report on the case. To such a home suspected cases could be sent before a certificate was issued, and he thought that since there would be no connexion with the workhouse or asylum, there might in many instances be a better chance of recovery. There might be two such institutions, one north and the other south of the Thames.

The Chairman said that at the end of the period of trial it might be found that certain patients were obviously cases for certification, and they would then pass to the asylum or to the workhouse, or possibly be the subject of application for reception to a licensed house. On the other hand, it might be found that as a result of the trial a person was not certifiable and ought to be returned to his or her friends. Could it not be hoped that during the period of provisional detention the cases benefiting by the quiet and treatment might completely recover?

Sir Robert Walden thought that 50 per cent. of the cases might do so. The provision of such institutions would relieve the pressure on the asylums in the metropolitan area, the accommodation in which had been inadequate for some time. From experience gained in the course of frequent personal visits to London asylums he had found, in conversing with patients, that in some instances there was justification for their complaints. Frequently, however, the complaints were not substantiated.

The Chairman asked whether Sir Robert Walden had any views in regard to some independent tribunal or investigation as to the state of a patient in an asylum.

Sir Robert Walden replied that in a border-line case it might be desired to consult an expert.

The Chairman asked if the witness thought it desirable that those dealing as medical practitioners with mental cases should have some special qualification as distinct from the qualifications of the ordinary medical practitioner. Sir Robert Walden replied that over and above general medical education, such practitioners should be specialists in that particular branch of work and have had considerable experience.

Sir Humphry Rolleston said he had been much impressed by the stress laid on the desirability of the judicial authorities being highly experienced men and the medical men specialists. Was the witness of the opinion that the judicial authorities should be as specialised in regard to the inquiry into diseases of the mind as the coroner in regard to investigation as to the cause of death?

Sir Robert Walden said it would be better, but he thought it was impossible. It would be necessary to have a paid authority. As to the medical man being as great a specialist as the coroner and pathologist, he maintained that a man dealing with mental cases could not have too much knowledge. Certainly the D.P.M. certificate should be held by all who dealt with such cases.

Earl Russell asked the witness if he thought it desirable that there should be instituted in England the practice prevalent in Scotland of boarding out suitable cases in villages. The witness replied that provided both the cases and the foster-parents were carefully selected, that might prove a desirable course in certain instances.

Councillor C. F. Sanders, magistrate for the city of Cardiff, said he had no difficulty in regard to certifying cases. He was, of course, bound to rely on the certificate of the medical officers. He did not understand it to be his task to examine a patient and satisfy himself from his own observation as to whether that patient was sane or insane. Continuing, the witness said that in the course of the past two years as many as 333 cases had passed through his hands, out of which number 58 had been discharged without a certificate having been granted. In answer to a question by the Chairman as to these 58 cases, Councillor Sanders replied that they were dropped for various reasons, a large proportion of the cases having been brought in suffering from delirium tremens and the taking of methylated spirits, whilst others apparently suffered from severe depression of sudden onset, which after a short rest had passed off. There was sufficient accommodation in Cardiff for all cases arising in the area. Councillor Sanders had never seen anything to suggest to him that any further precautions to protect the public against undue detention were required.

The evidence elicited during the sitting showed that there were differences of procedure as between Birmingham and Cardiff. Whilst Councillor Sanders said that in 19 cases out of 20 he had before him, when considering the signing of certificates of detention, written statements from relatives or friends as to what they knew of the alleged lunatics, Mr. Lord said he made no inquiry as to whether the patient had either relatives or friends. Again, in Birmingham the workhouse was not used as an original place of detention or as a place in which the justice might visit the patient, whereas in Cardiff it was the almost invariable practice to use the workhouse for both purposes.

The Commission adjourned until Nov. 4th.

Reviews and Notices of Books.

THE EXTRA PHARMACOPŒIA.

Eighteenth edition. In two volumes. Volume I. Revised by W. HARRISON MARTINDALE, Ph.D., F.C.S., and W. WYNN WESTCOTT, M.D. Lond., D.P.H. Lond. London: H. K. Lewis and Co., Ltd. 1924. Pp. 1163+xxxviii. 27*s.* 6*d.*

IN the four years since the last edition of the Extra Pharmacopœia appeared much work has been done on the chemical and physical properties of the substances used in medicine, research to which the authors have made their own contribution. All this practical laboratory work has been summarised and critically sifted with a view to presenting to the practitioner and pharmacist a key to up-to-date information on drugs and therapeutic agents in a pithy and concise form. Some new features appear in the present edition. Notes on alkaloids deal with both bench work and physiological trial, and a means is suggested of enhancing the effect of these drugs by the simultaneous use of alkali; this "activation" is corroborated by experiment on the authors and their assistants. Information on periodides, unavailable elsewhere, is given in this book along with the actual therapeutic doses determined by use in man. Attention is called to the intravenous application of salts of aspirin, the calcium salt having proved of definite service in relieving pain in sciatic and rheumatic affections. A heroic attempt has been made to bring the evidence regarding alkali bismuth tartrates into proper order. The provisions of the Dangerous Drugs Acts are set out in a form which makes the duties both of medical man and pharmacist clear at sight. Timely information will be found on many current topics; the value of ethanesal, the properties of nucleinic acid in increasing the leucocyte count, the fact that solutions of cocaine hydrochloride really can be boiled in glass vessels, the claims of Besredka to produce vaccines effective on oral administration. The poisons schedule is brought up to date, and an intravenous dose table throws light on dosage in a field where standardisation has been imperfect. Not the least interesting part of the book is the preface containing some remarks straight from the heart of a dispensing chemist who would welcome the confidence of the physician on matters of doubt relating to prescriptions. The authors appeal to the practitioner to help forward the British drug industry.

We have said enough to show that in its new form the Extra Pharmacopœia remains a storehouse of current information and a safe book of reference. We repeat our opinion that it is one of the few books which the medical practitioner, the analyst, and the pharmacist cannot afford to be without.

FERTILITY AND STERILITY IN HUMAN MARRIAGES.

By EDWARD REYNOLDS, M.D., and DONALD MACOMBER, M.D. London and Philadelphia: W. B. Saunders Company. 1924. Illustrated. Pp. 285. 25*s.*

THIS is a comprehensive monograph on a subject that has received considerable attention in the last 20 years. From the beginning the authors emphasise the fact that modern research has shown more and more emphatically the importance of the male in all questions of fertility, and for this reason they have secured the collaboration of an expert on the subject of male sterility, Dr. Edward L. Young, jun. Even such conditions as habitual miscarriage and one-child sterility are, as they point out, not necessarily indicative of trouble in the female. Miscarriage may be due to decreased fertility of either partner, the miscarriage resulting from the death of the fœtus or from its imperfect attachment to the uterus. Observations on animals have shown that in the cases of impaired fertility the uterus contains a percentage of blighted embryos interspersed among normal ones, the condition being due to conjugation by imperfect gametes. In an interesting chapter dealing with relative infertility in human marriages, the authors discuss the influence of diet, habit, physical exercise, nervous overstrain, and minor constitutional derangements on fertility. They quote instances of oligospermia in the human male which have been remedied by the adoption of a suitable diet and of sufficient outdoor exercise to improve assimilation, and it is obvious that if such changes can be effected in the male equally satisfactory results may be expected in the case of the female. The diet which is most favourable to fertility is one which contains a high percentage of animal proteins, together with some slight excess of vitamins and mineral salts. Associated with the alterations in diet should be a complete and prolonged change from habits of civilised life with the substitution of outdoor for indoor work. The alterations should, in the opinion of the authors, be made as early as possible in all cases in which marriage is not promptly followed by pregnancy. In the absence of voluntary prevention failure of prompt impregnation after marriage always implies at least some slight abnormality in the condition of one or other partner. In dealing with obviously diseased conditions of the genitalia it is interesting to note that the authors consider that the importance of gonorrhœa in causing female sterility has been exaggerated. This exaggeration they believe to have resulted from an unwarrantable assumption that chronic genital infections in a married woman, even unaccompanied by the history of an acute onset, are always due to unrecognised gonorrhœa in the husband. In actual fact non-specific infections are far more common than is usually recognised, and in the opinion of the authors these can be differentiated from gonococcal infections by the absence of a history of acute onset.

The book concludes with a chapter on the surgery of sterility. This includes operative measures on the cervix, such as Pozzi's operation, curettage, and the surgery of the ovaries and tubes. Included in the latter is a description of the technique of insufflation of the tubes with carbon dioxide gas as a means of diagnosis and treatment of tubular disease. Finally the authors point out that surgery, although it may be of use in remedying certain grosser defects, is only one of the weapons with which sterility can be attacked, and that in all cases it is of vital importance to consider carefully the physiology of the condition. It is indeed along physiological rather than pathological lines of study that future progress in this subject will be made.

This book is clearly written, well balanced in its views, and comprehensive in its outlook. We recommend it to all interested in this important subject, whether they be gynæcologists, genito-urinary surgeons, or general practitioners.

AMPUTATIONS.

By NORMAN THOMAS KIRK, M.D., F.A.C.S., Major, Medical Corps, U.S. Army. Published under the authority and with the approval of the Surgeon-General, U.S. Army. Washington, D.C.: *The Medical Interpreter.* 1924. Pp. 110+ix.

Major Kirk is chief of the Amputation and Orthopædic Section of the Walter Reid General Hospital at Washington, and here, as previously at No. 3 General Hospital in New Jersey, he has had exceptional experience of amputations, some 700 of which he has himself performed. He is therefore able to speak with authority. This monograph may, moreover, be considered as embodying the views officially approved by the medical authorities of the United States Army, seeing that Surgeon-General Ireland contributes a foreword to it. It must be a matter of congratulation that Major Kirk seems to have arrived at conclusions as to sites and methods of amputation very similar to those that were reached some years ago by British surgeons and expressed in works published in this country. The author describes an ingenious and

apparently successful flap-sliding method for covering short guillotine stumps which is likely to be of use should the septic conditions of the war in France be repeated in the future, and which may well be borne in mind by all surgeons who have to amputate crushed limbs, with great destruction of soft parts, and consequent scarcity of covering for the bones. The provisional artificial leg adopted by the U.S. Army appears to be rather over-elaborate for its purpose, and to lack the simplicity of the fibre cone, deservedly popular in this country, which is not mentioned by Major Kirk. To many surgeons it appears better that the patient should have a provisional prosthesis as soon after amputation as possible, but this should be one as easily controlled as the jointless fibre cone, rather than an elaborate artificial limb with knee- and ankle-joints. Major Kirk describes and recommends a provisional arm made on somewhat similar lines to the leg.

SYPHILIS.

Kurzes Lehrbuch der Gesamten Syphilis mit besonderer Berücksichtigung der inneren Organe. Fachbücher für Ärzte, Band IX. Herausgegeben von E. MEIROWSKY, Köln, and FELIX PINKUS, Berlin. Berlin: Julius Springer. Pp. 572. 86.50.

THIS is a complete handbook of syphilis edited by Drs. Meirowsky and Pinkus, in collaboration with 14 other writers. Prof. v. Wassermann contributes a concluding chapter.

The aim of the book is to bring the whole subject of syphilis in all its medical ramifications within one volume, and though we remain doubtful as to whether this is the best way to treat such a complicated subject, we must admit that much success has been achieved. The book has been kept within reasonable limits, and not much overlapping is found. The different chapters are each written by one who is an authority in his specialty. The change, however, in the style of writing from chapter to chapter makes the book less readable to the foreigner as a text-book, while as a work of reference it is too condensed. The chapters on syphilis of organs of the chest and abdomen and nervous system are excellent—that on syphilis of the organs of internal secretion is not so good. In the matter of therapy the notes are scrappy, excepting the part on the treatment of tabes.

The volume as a whole may be commended. It has been written and edited with the greatest care.

INFECTIONS BY UNKNOWN ORGANISMS.

Traité de pathologie médicale et de thérapeutique appliquée. Vol. XVI., Infections à Germe Inconnu. Publié sous la direction de EMILE SERGENT, Professeur de Clinique Médicale Propédeutique, Médecin de la Charité, Membre de l'Académie de Médecine; L. RIBADEAU-DUMAS, Médecin de la Maternité; et L. BABONNEIX, Médecin de la Charité. Paris: A. Maloine et Fils. Pp. 143. Fr.25.

A COLLECTION of diseases due to infections by unknown organisms in a single volume is a good idea. Such a collection should give the reader a mass of information which is often difficult to sift from the usual sources, and it should, moreover, be a keen reminder of our ignorance of the essential pathology of many of the commonest diseases. The volume under review is, however, disappointing: many obscure infections are not mentioned, and there are included certain diseases, such as whooping-cough, in which the causal organism, if not finally and completely established, is nevertheless believed to be known, by the writers of the article amongst others. Apart from the paradox of its inclusion, the article on whooping-cough by E. Weill and Péhu is excellent, the clinical evidence that pertussis is infectious only in the stage before the paroxysmal cough develops being particularly interesting. H. Grenet's description of rheumatic fever is marred by the narrowness of his review of the world's literature; such English authorities as he quotes are often given with wrongly-spelt names, a fault which is deplorably common in French medical literature. British observers will not agree with this writer in his statement on page 267 that the essential lesions of rheumatic fever are in the joints. The most interesting articles in the volume are those by Prof. E. Marchoux, on sweating sickness, and by P. E. Armand-Delille, on influenza; the latter embraces a clear summary of our present knowledge, and may well be studied by all students to whom the late epidemic was an episode in their pre-medical days. Of the diseases omitted, trench fever and encephalitis lethargica are the most important; their absence is further evidence of what we have previously noted in this series—namely, a laxity in the general editing.

THE INTERNAL SECRETIONS.

For the Use of Students and Physicians. By Dr. ARTHUR WEIL, Assistant Professor of Physiology in the University of Halle. Authorised translation by JACOB GUTMAN, M.D., Director, Brooklyn Diagnostic Institute. London: George Allen and Unwin, Ltd. 1924. Pp. 287. 18s.

IN reviewing the second German edition of Dr. Weil's book in 1922 we expressed the hope that an English translation might put within the reach of more students and physicians the sound information contained in its pages. The translation is based on the third edition, and we have nothing but praise for the way in which the work has been carried out. The order of treatment of the subject is original; the ductless glands are not dealt with seriatim, as is the rule in text-books; Dr. Weil studies them according to their effects. He takes the various functions of the body in turn, and discusses the way in which they are modified by the action of the various internal secretions. Finally, the chemical properties of the internal secretions, their inter-relations, and their relations to the central nervous system are discussed. The treatment is logical and stimulating, and the English edition should prove as great a success as other editions have done. Our only word of complaint is concerning the illustrations; these are not nearly so well done as in the original edition of the work. Fig. 12, for instance, shows scarcely anything.

OPHTHALMO-OPTICAL MANUAL.

By WILLIAM SWAINE, B.Sc., Lecturer in Physics, West Ham Municipal Technical College. London: Hatton Press, Ltd. Pp. 152.

THIS little book, well written, practical, and non-mathematical, should be of much use to the student workers in ophthalmic optics for whom it is intended. Moreover, ophthalmic surgeons will find that it explains some optical phenomena often passed over too lightly in text-books on refraction—e.g., the cylindrical effect produced by the tilting of a lens or by the obliquity of the line of sight when directed through the periphery of a lens, and the varying effectivity of lenses according to their position in front of the eye. About half the book is devoted to purely optical problems, which are strictly within the province of the optician. The other half deals with the optical defects of the human eye, sight-testing, and correction. This part will appeal to the non-medical prescribing optician, and it must be admitted that if the directions found in it are faithfully followed, his results in the majority of adult patients will probably not be unsatisfactory. The optician, however, must necessarily be at a disadvantage compared with the ophthalmic surgeon in dealing with any difficult case of refraction. His subjective tests, however carefully the methods of "fogging" are carried out, are sometimes misleading, and even with the most intelligent

patients it may be very difficult to get wholly satisfactory results without either repeated examinations at different times or else the employment of a mydriatic which, by enlarging the pupil and eliminating the accommodation, makes possible an objective test. Mr. Swaine describes the method of retinoscopy, but without a mydriatic he does not pretend that it can attain to the accuracy which he claims for his subjective tests. More important for the non-prescribing optician is the information on frames, mounts, centring of lenses, &c., which will be found here. The subject of bifocal lenses receives notice which is barely adequate to its importance. With this exception the only obvious defects are a statement on the first page that the dazzling sensation experienced by anybody who after having been in the dark for some time enters a well-lit room is due to the time taken by the pupil before it contracts fully to light; and a sentence on page 24 on the numeration of prisms, which is unintelligible. The last ten pages of the manual are devoted to optical tables, which are decidedly useful. They deal, among other things, with the effectivity of lenses at varying distances from the eye, with the prismatic equivalence of different degrees of decentration of lenses, the prismatic effects in near vision of distance centred lenses, and so on.

We have said that this little book is non-mathematical. Those who require mathematical solutions of problems connected with lenses, prisms, and illumination will find what they want from the pen of the same author in almost any number of the *Optician and Scientific Instrument Maker*.

CHARTS ON THE CHEMICAL REACTIONS OF THE COMMON ELEMENTS.

By JOHN A. TIMM, Ph.D., Instructor in Chemistry, Yale University. London: Chapman and Hall. 1924. Pp. 81. 10*s*.

THIS book consists of series of equations, grouped in a very complicated manner, with no descriptions of the reactions. The author's method is to start the page with the symbol for the element, and, by means of a series of arrows and lines, to give every reaction. The result is a somewhat bewildering collection of lines and symbols, which may be recommended to those who enjoy wrestling with the intricacies of a Bradshaw time-table.

THE PLANT ALKALOIDS.

Second edition. By THOMAS ANDERSON HENRY, D.Sc., Director, Wellcome Chemical Research Laboratories. London: J. and A. Churchill. 1924. With eight plates. Pp. 456. 28*s*.

IN the new edition much of the text has been rewritten and a good deal of new work incorporated without increasing the size of the volume. Less space is now devoted to methods of estimation. On the other hand, more attention has been paid to such information as is available on the correlation of chemical constitution and pharmacological action, a subject upon which it is still impossible to draw any general conclusions. The exact interpretation of the term alkaloid is a matter dependent upon individual opinion, some writers including and others excluding, for example, the group of purin bodies; the present author belongs to the former category. The number of undisputed alkaloids known is already very large, and new additions are continually being made; in these circumstances it is satisfactory to note how some of the alkaloids which figure among those of unknown constitution in the earlier edition appear in the later one among those whose constitution is established; this is notably so in the harmaline and cephalonium series of alkaloids, the last named occurring in the so-called "Mescal buttons." A new feature of the present edition is the inclusion of eight full-page plates, illustrating some of the more important drugs.

Reports and Analytical Records.

"TABLOID" HYPODERMIC INSULIN HYDROCHLORIDE (STERILE).

(BURROUGHS, WELLCOME AND CO., SNOW HILL BUILDINGS, LONDON, E.C. 1.)

THIS new "tabloid" preparation of insulin, prepared under conditions formally approved by the Medical Research Council, has been submitted to clinical tests with results that coincide with standard insulin, while the tabloid form ensures sterility, stability, and accuracy of dosage. The product is biologically tested before issue. Each tabloid is equivalent to one average dose of ten clinical units, and when dissolved in 0·5 c.cm. of sterile distilled water is equivalent to an equal volume of standard insulin. The product is supplied in two packings, (1) cartons containing ten tabloids in one tube, and (2) cartons of ten tubes each containing one tabloid.

SOLOID BENEDICT TEST.

(BURROUGHS, WELLCOME AND CO.)

This test for sugar in the urine is reputed to be more delicate than Fehling's test. The tabloid outfit consists of a carton containing alkaline citrate and copper sulphate which may be used in one of two ways; in either case the colour change occurs with as little as one per mille of glucose, the change being very pronounced when two per mille or more of glucose is present. The instructions are as follows:—

1. Dissolve one "Soloid" Alkaline Citrate in 30 minims (1·8 c.cm.) of water with the aid of heat. Dissolve one "Soloid" Copper Sulphate in the hot solution and add four drops of urine; mix and boil gently for two minutes. The presence of glucose is indicated by a change in colour and formation of a yellowish to red precipitate.

2. Alternatively, the mixed urine and Benedict Solution may be heated in a boiling water bath for five minutes, allowed to cool, and the colour noted after ten minutes. A change in colour is produced by the urine containing 0·1 per cent. of glucose, and the difference is very decided when 0·2 per cent. of glucose, or more, is present.

The method is intended for qualitative analysis outside the laboratory for patients to whom insulin is being administered and whose urinary sugar content is the deciding factor in treatment. Each carton contains sufficient material for 24 tests.

ALLENBURYS DIET FOR ADULTS.

(ALLEN AND HANBURYS, LTD., 37, LOMBARD-STREET, LONDON, E.C. 3.)

This is a partially digested milk and wheaten food which is readily assimilated. While suitable in general for persons of weak digestion it is especially recommended for use by nursing mothers, invalids, convalescents, and the aged. Its preparation entails no trouble; it is simply necessary to add boiling water and stir. The percentage composition of the diet is stated as follows:—

Milk Fat	15·4
Milk and Wheat Protein	15·2
Carbohydrates (Lactose, Soluble Starch, Malto-Dextrin, &c.)	62·9
Mineral Matter	4·3
Moisture	2·2

Calorific Value: 132·3 calories per oz. weight of powder.

This diet is quite distinct from the well-known foods for infants prepared by this firm.

ZEDENO POROUS SHEATH BANDAGE.

(CHAS. ZIMMERMANN AND CO., 9/10, ST. MARY-AT-HILL, LONDON, E.C. 3.)

This is described as the Swiss Zedeno dressing for varicose ulcers and is a plastic web bandage which dries at the temperature of the body in about a quarter of an hour after application, forming an even and comfortable sheath for the ulcerated area. It is claimed that by its use relief can be obtained for varicose veins and varicose ulcers without keeping the patient in bed. The composition of the dressing is not stated, but it appears to be an elegant form of Unna's paste and should prove of practical value.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 1, 1924.

SPIRITUAL HEALING.

THE practitioner of so-called orthodox medicine is confronted from time to time with records of "cures" obtained by what are often claimed to be unorthodox methods, and with rumours of still more marvellous results secured, as the exponents of these methods hint, by means of which the ordinary physician has no cognisance. We are told that in matters political the public memory is notoriously short, but in matters medico-therapeutic it is equally true; or, rather, there is an admixture of ignorance with the forgetfulness, for it is surprising how frequently modes of healing that are openly advertised as "new" or "novel" only repeat a technique which is as old as the hills. The undoubted success of not a few varieties of the healing art vaunted as panaceas by enthusiastic disciples, if not always by their supposed originators, offers food for thought and suggests some comments. Without going further back than the last hundred years, the student of the subject can readily recall instances of spiritual healers who have risen to fame and success, and have enjoyed a vogue claimed to be unprecedented, who have, it may be, established schools of devotees, only to fall at length into an equally profound oblivion. The founder of the Mormon religion, JOSEPH SMITH, cast out devils in the name of the LORD, and tried his hand on diseases with no little efficacy, if old records are to be trusted. In fairness it should be said that behind his apparatus of holy oil, consecrated flannels, and the like, SMITH gave shrewd indications that he had at least apprehension, dim though it may have been, of the power of mental suggestion. He recognised his limitations in the cholera epidemic of 1834, and, with a curious combination of religiosity and what the Americans call "horse-sense," held to a theory that healing is a sacerdotal gift, a priestly function, and that without faith no cures are possible. The cult of Dowieism was founded by JOHN DOWIE, of the "Temple of Zion," whose meteor-like rise to heights of notoriety led many of the unthinking to hail him as almost divine, and who published a now utterly forgotten periodical entitled *Leaves of Healing*, filled with wonderful (and preposterous) examples of cures effected "at a distance" through a mystical power of faith of which he was the arch-exponent. More recently still, we hear of a "New Civilisation Church and School," whose teaching, its originator lucidly explains, "is standardising the world and passing all thought into one great universal impulse," and where healing by regeneration through fasting and otherwise holds a prominent place. Again, a little brochure has reached us which heralds the advent in this country of a system of healing "practised with great success for about thirty centuries in Gosainthan, the highest shrine where man holds communion with his Creator, situated 16,800 feet above the sea-level, among the snows of the Himalayas." For a reason that is sufficiently obvious, it is contended that this particular method of *healing* does not "in any way interfere with the Christian *faith*."

If we examine dispassionately such features as these and many other movements of a similar character have had in common, we are met at once with the universal existence of an interrelation between practitioner and subject consisting in sublime self-confidence on the part of the former and eager expectation on the part of the latter. Without this *rapport* no fruitful results can be attained. For the securing of these, further, an atmosphere of emotional preparedness is no less imperative, and the more lush the emotion the more effective is the ceremonial. Of the truth of this statement history provides innumerable instances. If the curious reader will examine the published records of spiritual revivals and camp meetings among any comparatively emotional populace he will find abundant evidence to the purpose. Thus the Rev. SAMUEL J. MOORE published in 1859 a now forgotten little volume entitled "The History and Prominent Characteristics of the Present Revival in Ballymena and its Neighbourhood," in which he scans critically the accompaniments of the movement, and adduces instances both of the appearance of purely hysterical phenomena under the mass-influence of the time and place, and of the "cures" of morbid conditions in the same emotional atmosphere. In an environment of intense sympathetic expectation it is not surprising that resistances are broken down. On a famous occasion, years ago, it may be remembered, the phenomena attributed to the supernormal powers of a celebrated "medium" failed to make their appearance because of the "offensive incredulity" of a young doctor of medicine, happily still with us and known by reputation the world over. Such is the effect of faith, or of unfaith.

Now, when exaggerated if sincere claims are once again being made on behalf of spiritual healing, it is desirable they should be placed in their proper perspective. Of the reality of spiritual emotion there can be no question, but in any discussion of the mechanism of production of the "cures" we are bound in seriousness to ask whether the "spiritual" or the "emotional" factor predominates, whether any distinction is or can be drawn between them, whether the "spiritual" influence accomplishes something beyond the scope of other less pretentious methods. In respect of the last of these our answer must be a direct negative. Cures as "striking," as genuine, and as enduring, are being effected daily in hospitals and consulting-rooms by men who make no claim to tap a wonderful and mystical power outside themselves, who use simple and straightforward means, who adapt themselves to the needs of their patient by explaining technique where this is desirable, or by quiet assurance where the subject does not wish to know, or is intellectually not very capable of understanding, how the result is to be obtained. It seems unnecessary to adduce concrete instances from the experience of any of the practitioners of orthodox medicine, for we should not know where to stop. It is desirable, however, to point out that modern knowledge of the existence of the "unconscious motive," and of the working of the unconscious mind, teaches us to feel no surprise, still less to postulate any supernormal or occult agency, when an inveterate case of "paralysis" casts aside its crutches and walks. A distinguished physician was wont to impress on his students how frequently the chronic "functional" patient "gets tired of his infirmity," with the natural corollary that he becomes ripe for a "cure," and that "cure" may be effected by any means whatever, physical or spiritual, once the psychological moment arises. The history of the recent war neuroses affords one more proof of the accuracy of this observation. No physician worthy

of the name is poor-spirited enough to fail to rejoice when the sick in body and mind are healed by "spiritual" agency; but as he can by ordinary techniques effect identical cures himself and is averse to anything that savours of advertisement he may be pardoned if he tends occasionally to become impatient at the interpretation put on their wonder-working by some self-styled spiritual healers. His hope is that more members of the profession will devote themselves to the relief of the great amount of "floating" nervous ailment that exists to-day, for they possess the immense advantage of knowing what can be influenced by mental methods and what can not, and of being able to recognise and diagnose the ætiological factors that are responsible.

PRESERVATIVES IN FOOD.

THE report, summarised on another page, of the Departmental Committee appointed by the Ministry of Health is an important landmark in the long-drawn-out controversy regarding the use of preservatives in food. For many years the position has been highly unsatisfactory to all parties—consumer, local authority, and food-trader. An inquiry set on foot by THE LANCET in the 'eighties finally resulted in the appointment of a Departmental Committee which made what was then considered an exhaustive investigation.[1] But the report of this Committee, issued in 1901, did not improve matters, for its recommendations (set out on p. 929) never took legal form. They were, in fact, unworkable, since they left the door open to the use of all sorts of new preservatives, except for the few foods specifically mentioned. The present report takes up a perfectly definite standpoint. The trade chemist, as Dr. W. G. SAVAGE has forcibly stated,[2] can always be relied upon to produce other chemical combinations which act as efficient preservatives, and it is futile simply to prohibit specifically-named preservatives. The only effective procedure is to prohibit *all* preservatives, except those in a specified list. If the report is accepted as the basis of legislation all preservatives will now be taboo except sulphur dioxide and benzoic acid, and the use of these will be limited to certain articles and must not exceed prescribed amounts. The report is unanimous that if preservatives are added at all their presence, their nature, and their amount should be frankly declared when the article is sold. Considerable opposition to this was forthcoming, but the Committee satisfied itself that trade interests would not be seriously prejudiced by such a declaration, while the consuming public undoubtedly have the right to know whether or not they are taking preservative drugs with their food. This attitude will be welcome to the medical profession, since there is considerable suspicion, and some evidence, that some obscure disturbances to health may be due to unknown preservatives in the food, and definite declarations as to the presence of preservatives may elucidate the point. Legal difficulties have not been lost sight of by the Committee. To prove that a preservative or colouring matter mixed with an article renders it injurious to health is not an easy, inexpensive, or expeditious matter, and to establish it in one court is not of necessity effective in other instances or in other courts. At present any penalty falls on the retailer, as the person charged, and it is difficult to transfer this penalty to the manufacturer, who is often the real offender. The recommendations as to procedure are intended to remove these anomalies. The proposal that any prohibitions or limitations imposed by the regulations should bind the courts in proceedings under the Sale of Food and Drugs Act is a very important one, since, if adopted, it will only be necessary to prove the actual facts as to infringement.

In arriving at their recommendations the Committee had to consider the other side of the problem which is, how far the addition of preservatives is necessary in the interests of the producer and the community and the extent to which their limitation or prohibition would affect the problem of cheap food. No exact definition of preservatives was attempted, but certain substances, such as salt, saltpetre, sugar, alcohol, are not included, and the term is then interpreted as including "every other substance which when added to food has the property of preventing, arresting, delaying, or masking fermentation or putrefaction of food." In solving this problem the plan which appears to have been adopted was to consider each important food, or group of foods, and after hearing the evidence of the representatives of the trades concerned, to arrive at an opinion as to whether preservatives were really necessary. They considered that trade requirements would be met by allowing two preservatives and those in a limited number of foods, while as regards sausages a concession is made to trade necessities as they exist at present, the opinion being expressed that improved methods should eventually enable preservatives to be dispensed with. The Committee were rightly influenced by the fact that a proportion only of samples of the same kind of food contained chemical preservatives. From this it is an obvious inference that in a good many cases preservatives might be dispensed with, their addition being but a substitute for hygienic precautions and strict cleanliness. As an alternative to the use of preservatives, stress is laid upon the value and utility of the use of cold as a means of preserving food. The prevailing lack of facilities for refrigeration and cold-storage generally is emphasised, particularly in relation to transport. Many of the witnesses examined declared that defective railway transport was one of the main reasons for the use of food preservatives in this country. The Committee which reported in 1901 paid great attention to the subject of the harmfulness of preservatives, although no definite opinion on this subject was included in their recommendations. This aspect appears to have had less influence upon the present Committee and their report cannot be taken as either proving or disproving the harmfulness of the common preservatives in small doses. The difficulties in the way of obtaining proof of harm are so considerable and the evidences of harmlessness are, in the nature of things, so inconclusive that the Committee were well advised to take the broad line that since these substances are injurious in large doses and dosage is uncontrolled, it is justifiable to assume that their presence is undesirable. This is a reasonable standpoint provided that proceedings have not to be taken under Sections 3 or 6 of the Food and Drugs Act, 1875; but, as already mentioned, the point has not been overlooked. It still leaves the problem open as a matter of scientific controversy, but removes it from the heated atmosphere of the law courts.

For practical purposes the report classes preservatives into three groups according to their relative degree of undesirability. Group I., being the most undesirable, includes formaldehyde and its derivatives; hydrofluoric acid, its salts and derivatives. Group II. consists of boron preservatives; salicylic acid and

[1] THE LANCET, 1901, ii., 1682.
[2] Food and the Public Health, 1919.

its salts. Group III. comprises benzoic acid; sulphurous acid and their salts. The Committee came to the conclusion that if preservatives are to be used at all in food it is desirable that they should be confined, if possible, to those coming under Group III. Their report, however, refrains from offering scientific evidence in support of this classification. The difficult problem of colouring matter in foods is not solved by the present inquiry. The Committee do not do much more than defer it and recommend that the Ministry of Health should inquire into relative injuriousness and issue a schedule of those substances which may be used. They do, however, adopt the definite standpoint that the addition of colouring matters to foods is to be prohibited, except for those scheduled as harmless, provision being made for the extension of the list on satisfactory evidence of harmlessness. The possibility of toxic impurities, such as arsenic, being present in dyes is given careful consideration, and limits for arsenic are laid down. The prohibition of copper salts as a colouring matter for given vegetables is recommended on the grounds that their use is unnecessary, and that there is evidence that the action of copper salts in small but repeated doses may be prejudicial. From the strictly medical point of view the report may not add much to existing knowledge, but from the public health and administrative standpoints its recommendations, if embodied in legal form, will be invaluable. For the trader they will have the merit of substituting certainty as to what is required of him for the previous uncertainty and the probability of unequal treatment in different areas.

JAMAICA AND THE PANAMA CANAL.

THE United Fruit Company, an American commercial undertaking, acting on the enlightened advice of the general manager of its medical department, recently conceived the idea of holding an International Conference on Health Problems in Tropical America. To this conference were invited laboratory workers and clinicians from all over the world, and at the end of last July there gathered at Kingston, Jamaica, a body of men, many of them renowned in the scientific world, who had disregarded the advice of well-meaning friends that a visit to this part of the world in the middle of summer would ruin their health for ever, to discuss certain vital problems of tropical medicine. Amongst them was Sir James Kingston Fowler, who has recorded his impressions in a little volume which has recently been published.[1] After some interesting descriptions of the voyage, the pilot, the climate, and the people, the author plunges into the health problems which affect Jamaica. The prevalent diseases are malaria, hookworm disease, enteric fever, tuberculosis, and, until recent times, alastrim, which, from the preventive medicine point of view, is very similar to small-pox. One of the few bright spots in the sanitary history of the island is the work on hookworm disease. A campaign against this disease was carried out by Dr. B. E. Washburn under the auspices of the International Health Board of the Rockefeller Foundation, and proved a very successful effort. Otherwise, in the words used by the author in reference to the housing conditions in Kingston, "the municipal authorities stand condemned on every count." The U.F.C. wished to be shown how, if possible, the health of their employees could be better safeguarded, but the conference also had the effect, common to all such conferences, of focusing the attention of the inhabitants upon the problems in sanitation which confront them. The U.F.C. has certainly realised that sanitation pays, for whenever it takes over an estate the first activities include the building of a hospital, the erection of mosquito-proof dwellings, and the provision of an efficient water-supply ready for the arrival of the workers. That the inhabitants of Kingston have also been awakened to a "health conscience" seems highly probable from the speech made by the mayor at the dinner which terminated the proceedings when he pointed out that the Government must take up and carry out health measures for the island as a whole and not leave the matter in the hands of many small local authorities. Sir James Fowler discusses the interesting question of whether, with the eradication of tropical disease, such places as Jamaica will ever become suitable and permanent homes for white men and, wisely pointing out that it is the problem of the children which is the crux of the whole situation, he declares himself against the notion that Englishmen will ever be at home in the tropics. He concludes the section on Jamaica with some interesting "suggestions," which include the appointment of a special commission for five years with adequate funds at its disposal to deal with the question of town reconstruction for Kingston, to carry out surveys and laboratory research on malaria and hookworm disease, and to establish an efficient campaign against venereal disease which is appallingly prevalent.

Sir James Fowler entered the Panama Canal Zone with a very effective mnemonic for remembering the position of the principal ports. He left it with some remarkable impressions of the canal as an engineering triumph, and he vividly describes the passage through it of ships, controlled from directing stations at each pair of locks. When H.M.S. *Hood* passed through recently there was only just over two feet to spare on either side between the ship and the walls of the locks, and the fact that the passage was achieved without any mishap is a striking testimony to the skill of those who control the canal. From the health point of view the problem now facing the authorities lies in the fact that the number of employees engaged in connexion with the canal is steadily decreasing and the surplus is being absorbed by settling the men as labourers on the land in unprotected areas. Tribute is paid to the work of General Gorgas in connexion with the protection of the workers from yellow fever and malaria which alone rendered the completion of the canal possible, and it was proposed at the conference in Jamaica to commemorate this heroic worker by erecting an institute to be known as "The Gorgas Memorial Institute for Tropical Medicine." But mainly for economic reasons a change in policy has taken place within the last few years, and it was recommended by the authorities in 1921 that "the amounts expended for sanitation in the zone shall be reduced as much as possible consistent with maintaining the sanitary precautions necessary for the preservation of the health of American employees in tropical service." The result has been that amongst the unemployed labourers who have been settled on the land there has been a large increase in the number of cases of malaria. It appears to be impracticable to sanitate the country in which these settlers live, and already the presence of these men has adversely affected the malaria rate among certain of the workers on the canal and the residential and industrial centres are thus constantly threatened with the danger of infection. Sir James Fowler suggests "with great diffidence" that further research is necessary on the habits of mosquitoes with reference to the length of flight as it affects malarial transmission, and that in future when licences are granted to settlers in the zone it should be enforced that their holdings must be kept free from any conditions which may lead to the breeding of mosquitoes, and that in the place of the usual disreputable shacks, protected houses should be provided for these labourers which they must keep in repair. The work done by General Gorgas and his successors with regard to yellow fever has resulted in the disappearance of this disease in the Panama Canal Zone for 18 years, but

[1] An Impression of Jamaica and the Panama Canal Zone. By Sir James K. Fowler, K.C.V.O., C.M.G., M.A., M.D., D.Sc. London: Eyre and Spottiswoode, Ltd. 1924. Pp. 60. 2s.

Sir James Fowler utters a timely note of warning against the use of the word "eradicated" in connexion with this and other menaces to health in the tropics. He concludes his extremely interesting book with a description of the quarantine measures enforced in connexion with the canal, pointing out the danger attached to the modern simplification of procedure in certain cases where wireless is employed, for shipping passing through under any lax conditions may carry plague and malaria, for example, to distant ports. The United States has a moral obligation to the maritime nations of the world to prevent, as far as possible, the passage of disease to other parts of the world, and while this obligation is fully realised there appears to be a certain amount of danger in a system of "quarantine made easy."

Annotations.

"Ne quid nimis."

VOLUNTARY MENTAL PATIENTS.

ELSEWHERE in this issue appears an article by Dr. Edward Mapother, supplementary to his report which we have already noticed,[1] dealing with the first 18 months' work of the Maudsley Hospital. This hospital is unique in being the only institution provided for out of public funds where mental disorder is treated solely on a voluntary basis, and since it is unlikely to remain in this isolated position, its progress is of the first interest to any who are likely to be concerned in following the example set by the London County Council. It is hardly probable that anything amounting to a divorce between the ideas of detention and treatment will take place within the next few years, and the subdivision of mental hospitals into therapeutic centres and houses for the chronic insane is not immediately practicable, but that county and borough mental hospitals should be enabled to admit voluntary boarders may be called almost an immediate probability, and is already occurring in certain parts of Scotland. Nor is it unlikely that under new legislation further hospitals on the lines of the Maudsley will appear in progressive centres. While all may not agree that the recoverable insane are "entitled" to elaborate and expensive treatment, it may well be found that its provision is a national advantage. The supreme question round which Dr. Mapother's argument centres is suitability for the voluntary status. Here we may recall the observations of Dr. Henry Yellowlees at the annual meeting of the British Medical Association this year on the confusion of thought which exists with regard to "early" cases. The adjectives "early," "mild," "recoverable," "borderline," and "hopeful" are used somewhat indiscriminately, but greater variety than may be masked under these far from synonymous descriptions is hardly to be found in the whole realm of mental disease. The early senile dement may be mild and willing, but he is not recoverable; acute mania is eminently recoverable, but it is neither mild nor willing, and may unfortunately require certification for purposes of sufficient restraint, and because noise is, of all annoyances, the one form of disturbance which voluntary patients particularly resent in their companions. "Non-volitional" cases, who form a not inconsiderable class, present a special problem; would it be of advantage to legalise the detention of cases of confusion (in whom, incidentally, the prognosis under efficient treatment is particularly good) without recourse to certification in its present form?

Our whole system of dealing with insanity is at present in the melting-pot. No one can read the report of the sittings of the Royal Commission, of which an instalment appears on p. 909, without realising this. There are literally unlimited possibilities of change in the near future, and the experiences afforded by the Maudsley "experiment"—for so it is—may play no small part in determining our future methods. Details of many of these are to be found in Dr. Mapother's article. Here it is necessary to refer to only three of his main points. The first expresses the intention for which the hospital was built, and which experience has confirmed. "I wish to uphold the view that the aim should be to promote treatment, apart from the certified, of every willing case." The second is that notwithstanding certain gloomy prophecies the hospital has been filled; applicants for admission are increasing in numbers, and as they increase the selection of cases on the ground of amenability to treatment (and for the subsidiary purposes of research and teaching) will yield more and more satisfactory results. Lastly, the "separate treatment of voluntary cases of all degrees of severity" has been found a workable proposition. This, after all, is the most reassuring conclusion which the first year's work at the Maudsley could have been hoped to afford.

[1] THE LANCET, Oct. 11th, p. 761.

LATE ERUPTIONS IN SCARLET FEVER.

Dr. G. Fanconi,[1] of the Zurich University Children's Clinic, has noticed for several years that convalescents from scarlet fever present peculiar eruptions which are not mentioned in the ordinary text-books. The frequent occurrence of these lesions finally induced him to make a systematic examination of the skin of all scarlet fever patients, with the surprising result that 69 out of 74 children examined exhibited these late eruptions. Their diagnostic significance is increased by the fact that they may occur when there is little or no desquamation. Dr. Fanconi has classified these eruptions into the following four groups: (1) maculo-papular, (2) reticulo-rhagadiform, (3) large papular, and (4) pityriasiform. He regards the classification, however, merely as a makeshift, as all possible morphological transitions may occur between these groups. The maculo-papular eruption begins, as a rule, between the tenth and fourteenth day, rarely later, as a bright red punctate or minute papular eruption on the buttocks and extensor surfaces of the knees on either side of the patella, and then invades the posterior aspect and outer side of the thighs and often the flanks as well. The lesions are at first pale pink in colour, but in a few days the rash becomes more intense, especially towards evening, so that on superficial examination it simulates a relapse of scarlet fever. Subsequently the eruption assumes a yellowish-brown tinge and soon disappears altogether, being followed by secondary desquamation. While this variety is chiefly found in children with a smooth skin and little or no primary desquamation, the reticulo-rhagadiform eruption occurs only in association with intense desquamation, being frequently seen on the sides of the abdomen and thorax. It often accompanies the large papular variety which appears in a large proportion of all cases at the end of the first or beginning of the second week in the form of punctate brownish-red macules and papules. Towards the end of the second week some of the lesions become larger and usually assume a violet-red or brownish colour surrounded by a centripetal collarette of ragged epidermis. Lesions of this kind are found on either side of the patellæ, the thighs and sacrum being either isolated or thickly set or even confluent. The pityriasiform eruption which appears on the face at the end of the first week or in the course of the second often affects children who have had a similar skin eruption. It consists of sharply circumscribed, slightly raised lesions covered with white scales, and is most abundant round the corners of the mouth and eyes, while it is much less frequently found on the trunk and limbs. The occurrence of these eruptions is attributed by Dr. Fanconi to three main factors—viz., (1) mechanical irritation of the skin from without—e.g., a late eruption may be artificially produced by the applica-

[1] Jahrbuch für Kinderheilkunde, September, 1924.

tion of sticking-plaster; (2) local skin changes due either to scarlet fever or to previous disease or irritation of the skin; and (3) internal processes, of which another manifestation is an increase of the neutrophil leucocytes of the blood.

BRITISH TRADE IN DANGEROUS DRUGS.

FIGURES have just been issued by the Home Office to show the effect on British trade in morphine and heroin of the restrictive measures which were imposed by the British Government under the Dangerous Drugs Act, 1920, in fulfilment of the International Opium Convention of 1912. The following table gives the amounts of morphine, heroin, and their salts manufactured in this country during each of the last 14 years, and in the case of morphine the quantity exported. The latter information is not completely available in the case of heroin.

Year.	Quantity in ounces of morphine and its salts.		Quantity in ounces of heroin and its salts manufactured.
	Manufactured.	Exported.	
1910 ..	486,975	—	10,272
1911 ..	406,877	208,544	3,785
1912 ..	425,408	276,560	3,034
1913 ..	564,035	406,160	11,665
1914 ..	735,628	504,016	12,249
1915 ..	926,743	295,568	29,756
1916 ..	1,033,162	225,616	26,761
1917 ..	751,851	124,592	46,338
1918 ..	294,703	136,832	34,669
1919 ..	547,347	322,912	84,414
1920 ..	643,985	322,464	76,145
1921 ..	115,734	77,364	12,385
1922 ..	131,028	131,658	31,673
1923 ..	87,940	98,831	11,576

It should be added that the figures given as manufactured are the net amounts of morphine manufactured for use as such, and do not include morphine manufactured for conversion into heroin, codeine, or other alkaloids. The export figures for the years 1911 to 1920 are compiled from the Customs returns and do not include exports by parcel post or exports of preparations containing the drugs. The figures for 1921-23 are compiled from the returns made to the Home Office and include both exports by parcel post and exports of preparations containing the drugs. The export figures for the years 1914 to 1917 do not include exports on Government account between August 4th, 1914, and June 30th, 1917.

PERIODIC ROUTINE MEDICAL EXAMINATION.

IN his presidential address on Oct. 23rd to the Section of Epidemiology, Royal Society of Medicine, Dr. J. C. McVail referred to two directions in which he regarded further progress as possible in the improvement of health and the prolongation of life. One was the merging of medical service under the Poor-law into the general scheme of health administration. The other was the routine medical examination of individuals apart from illness. He recalled the fact that in 1907, at the request of the Royal Commission on the Poor-law, he had investigated Poor-law medical relief in England and Wales, and in his report had urged a system of medical inspection at all ages of life. The family doctor would, not too frequently, but at reasonable intervals, offer to make examination of those for whose health generally he is, or ought to be, responsible. His suggested course of action was sketched out by Dr. McVail as follows:—

1. He would acquaint himself with the general family history. He would note tendencies requiring to be checked—tendencies to general disease like tubercle, gout, rheumatism, diabetes, obesity, cancer, insanity, alcoholism, or the like.

2. With regard to the children, he would note their physical condition as a whole, their state of development in relation to age; indications of rickets, or tubercle, or glandular disease, enlargement of tonsils, defects of hearing and of sight, as bearing on health and education. He would give advice as to diet, bathing, fresh air, exercise, and the like. By prevention of rickets in female children he might succeed in hindering pelvic deformity with its serious results belonging to the child-bearing period of life. In connexion with the occurrence of actual illness, he would be careful to note whether there was any threatening of dangerous sequelæ, such as endocarditis after the acute infectious diseases; or ophthalmia or otorrhœa, which last, if neglected, is often followed, sometimes after an interval of many years, by fatal inflammation of the brain. He would note whether the child's nervous system was being properly developed, on the one hand, and its functional activity sufficiently restrained on the other. As regards the school child, he would see whether school work was being overdone; whether there was headache, or insomnia, or night terrors; whether the child was being taught to practise steady application in any specified task; whether it was being permitted to read books of too exciting or too advanced a character; whether it was being sent sufficiently early to bed, and made to rise early enough in the morning; whether it was being punished unwisely for faults due to its physical and mental condition.

3. As the child continued to grow into youth, the medical man would note whether athletic exercise was excessive; whether injury to the heart or other vital organs was being threatened; whether cycling was being overdone; whether, on the other hand, the youth was leading too sedentary a life and was unduly given to reading. When the time came he would advise as to the most suitable occupation, looking to the general physical and mental health and condition. Amongst girls, he would note tendencies to anæmia, gastric ulcer, and the like, and again, the question of insufficiency or excess of exercise would arise. Here, also, he would advise as to occupation with relation to length of hours and healthiness of employment, whether the work would be too sedentary or require too much standing; whether, as in the case of a teacher, it might involve too severe mental strain or voice strain; whether neuralgia and insomnia would result from the life proposed to be led.

4. Amongst women he would see that due care was taken to prevent mischievous sequelæ of childbirth, such as uterine displacements or inflammations.

5. Among men he would observe any tendency to trade disease, whether their employment was such as made special calls on any of the vital organs, and if so, whether these organs were reacting properly to the stimulus, or were threatening to break down under it. In most cases the important organs would be the heart and the lungs. Heart strain would be looked for, and bronchitis and emphysema and the like.

6. Independently of age and sex and occupation, the inmates of a household would be offered a general examination of their vital organs. In presence of heart lesions, advice would be given in order to prolong the duration of compensation, and to limit the calls made on the heart, so as to give it only so much work as it could properly perform.

7. In old persons attention would be paid to the condition of the arteries in relation to apoplexy, and to parts likely to be attacked by cancerous disease.

Although, Dr. McVail continued, periodical medical examination did not commend itself at that time to the Royal Commission, there had since been remarkable development on the indicated lines. Infant welfare, child welfare, school medical inspection and treatment carried out the principle as regards the young, although the work was not done by the family medical attendant but by school doctors and nurses. As to adult life, progress was now being made. In America several of the large life insurance companies provided for periodical medical inspection of their clients, not on grounds of benevolence, but of economy and finance. It profited them to defer death so that premiums might continue and payment of the life policy be postponed. During the administration of President Roosevelt the system was introduced into the army in respect of commissioned officers, and was reported to be of great value in conserving health. A circular issued by the U.S. War Department in 1921 urged the necessity of the examinations being carried out with thoroughness and attention to detail, so as to enable the Department "to apply practically, on a large scale, the principles of disease prevention and health preservation." The important question, Dr. McVail admitted, was the qualification of the average medical attendant to make skilled examination for the very beginnings of disease. No doubt different skill would be possessed by different men,

but if such a system were set on foot there would be steady improvement in fitness for the work. The whole medical curriculum has now been revised with the definite object of permeating the entire period of study by the principle of prevention; every subject from applied physics, chemistry, biology, and anatomy up to the clinical courses is to be taught with a view to the maintenance of health as well as the cure of disease. Teachers desiring to develop a new orientation may find a better field for instruction in the outdoor department or dispensary than in the hospital ward. Dr. McVail concluded by reiterating his opinion that no sphere of medical work was more certain to be helpful in the preservation of health and the prolongation of life than the periodic examination of individuals—of course, with their free consent, the adult for himself, the parent for the child.

INJURIES OF THE SPINAL CORD AND CAUDA EQUINA.

THE Second Report of the Committee upon Injuries of the Nervous System, appointed by the Medical Research Council to deal with and collate the results of experience in this field during the late war, has just been published.[1] Its subject material is the symptomatology and treatment of injuries to the spinal cord and cauda equina. Introductory sections on the applied anatomy and physiology of the spinal cord are followed by a précis of examinational methods and by comprehensive chapters on diagnosis, pathology, and treatment respectively. The report is brought up to date, so to say, by a final section on prognosis, in which it is stated that some 36 patients have been heard from recently, comprising 15 cervical, 19 thoracic, and 2 cauda equina cases of injury. From a consideration of these the conclusion is drawn that "little useful recovery of conduction in the cord, at least so far as voluntary motor power and voluntary sphincter control are concerned, is to be expected after the lapse of a very few months, although long after that time improvement in function can be brought about by physiotherapy, mechanical aids, and the many methods of re-education and training." During the war our knowledge of the functions of the spinal cord was materially increased by a study of the phenomena resulting from section of the cord by high-velocity projectiles. We learned that old chapters on the clinical sequelæ of total transverse lesions would have to be rewritten; that so far from outfall of function being a characteristic of the isolated spinal cord, it might live and express its activity by clinical signs such as the automatic bladder, involuntary reflex movements of the lower extremities, and the presence of the deep and cutaneous reflexes for these limbs. Some of these reflex movements, not specifically mentioned in the report, are of considerable scientific interest and perhaps of biological significance, in particular those associated with the sexual mechanism. We may note incidentally in passing that the report appears to have omitted reference to priapism and its treatment in its otherwise practically complete survey of the symptomatology of spinal-cord injuries. How long the isolated spinal cord is capable of functioning is possibly more of theoretical than of practical interest; it would appear, however, that there are cases where some of the lower cord segments, completely severed from the upper cord, are living in activity now, nine years after the injury. The descending degeneration that we were taught constantly set in after severe cord injuries is apparently less likely to ensue on clean-cut high-velocity lesions than with crushing lesions of the "fall of coal on the back" type. Under the term "spinal concussion" the Committee properly include cases of a definitely organic character, in which recognisable changes are to be found in the cord, while the clinical symptoms—those of spinal shock, viz., loss of motor power, diminution or loss of reflexes, impairment of sphincters, &c.—begin to disappear within a few days, or may persist for several weeks. Doubtless it is impracticable to draw any hard-and-fast line between the slight and the pronounced grades of concussion, and in not a few instances of genuine commotio (a term not employed by the Committee) the symptoms begin to clear up within some hours, not days, yet the authority of this report should help to dispel the common and erroneous idea that the familiar symptoms of a traumatic neurosis following blows or knocks on the spinal column are the result of "spinal concussion," "spinal commotion," "spinal irritability," and what not. Spinal concussion as a clinical expression is misused as much as influenza. A further point in this connexion concerns the matter of progression or otherwise of the symptoms. It is a known histopathological fact that reparative processes set in after spinal concussion; the œdema, minute hæmorrhages, focal areas of necrosis, damage to nerve cells and fibres, all eventually tend to vanish, and a perfect clinical recovery is the rule. If, accordingly, after an injury that is of quite minor degree, the symptoms not only do not clear up quickly but actually increase as time goes on, only two diagnostic alternatives are possible; either the injury has accentuated a latent organic spinal condition, recognition of which is always easy by proper examination, or else the state is a non-organic one and purely psychical, to which the injury as such has contributed literally nothing from the standpoint of ætiology. The sections on treatment, both surgical and medical, are particularly useful and thoroughgoing. Anyone who reads the paragraphs on the treatment of the paralysed bladder, bedsores, and the other distressing symptoms of spinal disease, will learn much that will help him to alleviate, if not to cure, these difficult complications. The Committee frankly acknowledge the absence of any complete solution of the problem of treatment in the matter of severe spasticity with involuntary flexor and extensor spasms; they mention the usefulness of certain drugs, such as luminal-sodium and hyoscine, but there is no reference to veronal as an antispasmodic, though it has often served in this respect. Surgical procedures (crushing the obturator nerves, resection of dorsal roots, &c.) are described without much comment on their efficacy or otherwise. The report represents the combined experience of those who are qualified to speak, and as such may be recommended to the profession at large.

[1] Special Report Series, No. 88. H.M. Stationery Office. 1s. 6d.

BIOCHEMISTRY AT GREAT ORMOND STREET.

THE Hospital for Sick Children in Great Ormond-street has decided to allocate some recent gifts of money to the installation of a biochemical department. This was opened on Oct. 23rd, at a meeting at which the chair was taken by Mr. John Murray, who made an eloquent appeal for further funds to extend and endow the department. He was supported by Dr. G. F. Still, Dr. F. J. Poynton, and Dr. D. N. Nabarro, the last named showing some slides indicating the importance of vitamins in relation to rickets and scurvy. At the conclusion of the meeting the new department was thrown open for inspection. The necessity for the appeal became apparent on visiting the laboratories. They consist of converted rooms of the hospital, which may suffice for immediate needs, but which allow no room for expansion. The position was admirably summed up in a remark, made by a member of the honorary staff, "only an Englishman could work here." That Englishman is Dr. G. A. Harrison, the new biochemist, to whom we wish every success. With such splendid clinical material the coöperation of clinician, pathologist, and biochemist must result in great advances. That there is ample room for such is shown by the almost complete lack of chemical observations on diseases of children in the literature of this country. At the same time it is

unwise for the public to be directed to the biochemist as the magician who will deliver them from their toils. The belief is growing that if only a man who can juggle with blood and a colorimeter can be set to work all the insoluble problems of medicine will fade away. Every decade in the history of medicine has been associated with some specialised branch, through which it was hoped to find the solution to most or all of the problems of the day. The institution of the science of morbid anatomy by Morgagni marked a great advance in the knowledge of the time, with the result that it was thought that the ultimate solution to the majority of medical problems lay in the dead house. When the broad lines of this mode of investigation had been worked out, it was eclipsed by Virchow's work on cellular pathology. Nothing was talked of but histological research, and it appeared that the complete medical horoscope could be cast through the microscope. This in turn was displaced by bacteriology, whilst to-day biochemistry strides rapidly to the front. The pioneers of all these movements have themselves been modest men, realising that their discoveries stand out, by contrast, as bright stars against a background of ignorance. Biochemistry is even now becoming a hack word, and unless a reasoned conception of its aims, objects, and probable attainments be held, the science will sink into discredit. The public utterances of certain distinguished pure chemists have thrown out a salutary warning. But the fact remains that the older clinical and pathological observations stand in great need of supplement by more delicate means.

THE BANANA AS AN ACCESSORY FOOD.

THE vitamin content of the banana has already been the subject of research, and it seems to be generally agreed that this fruit contains large quantities of C-vitamins and a not negligible quantity of B-vitamins. There is not such unanimity of opinion with regard to the presence of A-vitamins, and it was with a view to throwing further light on this matter that Dr. Eva Sopp, of the Kapp Laboratory, undertook the following investigations.[1] About 25 young rats, each weighing from 30 to 40 g., were put on an A-vitamin-free diet, on which they were kept till they began to lose weight and show signs of A-vitamin deficiency. After most of them had developed advanced xerophthalmia they were classed in three groups, each of which received a different ration of banana in addition to the basal A-vitamin-free diet. The rats in the first group were given as much banana as they could eat. After a fortnight, during which they made little progress, rapid improvement was observed in the condition of the eyes, which in most cases were perfectly healthy when this experiment had lasted 10 to 12 weeks. After the rats had been on the banana diet for three weeks their general condition improved greatly, there was a uniform gain of weight, and they were full grown by the time the experiment was brought to an end. The rats in the second group were given only 1 g. of banana daily in addition to the basal A-vitamin-free diet. It was anticipated that this banana ration would be insufficient to restore the rats to normal health, but to Dr. Sopp's surprise the rats in this group fared practically as well as those in the first group. The rats in the third group were given 2 g. of banana daily, and they also throve on this addition to the A-vitamin-free diet. Dr. Sopp draws the interesting conclusion that 1 g. of banana is to a young rat as four or five whole bananas are to a three-year old child, and that with even less than four or five bananas a day it should be possible to provide a young child with a sufficient supply of A-vitamins. In addition to its high and varied vitamin content, the banana possesses many virtues, prominent among which are its pleasant taste and digestibility. It contains from 19 to 20 per cent. of sugar and starch, and from 0·5 to 1 per cent. of fat, not to mention 4 to 5 per cent. of protein. With so much to its credit, it is to be hoped that the banana will remain within reach of the modest purse.

[1] Norsk Magazin for Laegevidenskaben, September, 1924.

THE LONDON (R.F.H.) SCHOOL OF MEDICINE FOR WOMEN.

THOSE who planned the functions designed to celebrate the jubilee of the London (R.F.H.) School of Medicine for Women deserve credit for organising such a varied programme. The dinner at the Guildhall was on a grand scale, the service at St. Paul's was impressive, and the evening party at the school was just friendly. At this party, where the whole of the quadrangle of the school appeared to be enclosed in one huge marquee, and all the buildings were open to visitors, mimes and concerts and a dance were held; some of the lay visitors might have felt still colder—for it was a chilly night—if they had realised the normal occupations pursued in the room where they enjoyed the plays, grave and gay, performed by the students. Cheery greetings and nicknames were shouted across well-remembered corridors, and possibly the past students found this party where old friends foregathered the most entertaining part of the celebrations. To outsiders, on the other hand, St. Paul's Cathedral crowded so that no vacant seat could be discovered, by men and women largely in academic dress, all assembled to give thanks for opportunities of service, was an imposing spectacle. The passage in the order of service which riveted attention was as follows:—

> Through the ages there have been women in spirit born before their time. They had vision and faith, and by their toil and sacrifice, by their persistence and courage, opportunities for women in training, work and service have been won. Three Pioneers opened the doors of Medicine to Women: ELIZABETH BLACKWELL, ELIZABETH GARRETT ANDERSON, SOPHIA JEX BLAKE. With love and reverence our hearts turn to them.

The duty of commemorating these three women was the main subject of a speech delivered the night before at the Guildhall dinner by Miss L. Aldrich-Blake, the Dean of the school, when she spoke of the intention to collect money to endow university chairs in physiology, pathology, and anatomy to be named after them. Miss Aldrich-Blake paid a tribute also to those far-sighted and fair-minded men who as individuals or as members of official societies or bodies had helped generously and gladly in women's medical emancipation. The toast of Women's Work was proposed by the Dean of St. Paul's, that evening in cheerful vein, and responded to more seriously with fine delicacy by Lady Barrett and Mrs. Fawcett. Prof. E. Gardner, Vice-Chancellor of the University of London, toasted the school, and its Dean, in responding, handed to the chairman of the Royal Free Hospital a Roll containing the names of new subscribers and donors secured by past and present students during the jubilee year. It fell to Prof. Winifred Cullis to propose the most popular toast of the evening, that of the chairman, Mrs. Scharlieb, M.D., who is president of the school. Mrs. Scharlieb was a touchstone whom not to know was not to be a member of the school, for she made herself a personal friend of staff and students, and in herself combined tradition, achievement, and inspiration. The large company of medical women, students, and their guests rejoiced with loud applause at this apt expression of what Mrs. Scharlieb means to medical women, and we would join them in the hope that their illustrious president will be spared to see still greater development and prosperity of the school.

AT the recent sitting of the new Dental Board it was resolved to notify dental practitioners with addresses in the Irish Free State that the Dentists Acts no longer apply to that part of the British Dominions, and that, unless they desire to practise in places where these Acts are in force, they are not compelled to have their names retained in the Dentists Register.

WE learn that the 1924 Nobel Prize for Medicine and Physiology has been awarded to Prof. Willem Einthoven, of Leyden, Holland, for his discoveries in connexion with the mechanism of the electrocardiograph.

NOMINATIONS for Direct Representatives to the General Council for the period 1925–29 must be made before next Thursday, Nov. 6th. The four nominees of the British Medical Association for England and Wales are Dr. R. A. Bolam, Dr. H. B. Brackenbury, Dr. J. A. Macdonald, and Sir T. Jenner Verrall. Dr. F. H. Westmacott is standing as an independent candidate. Their election addresses will be found on p. 935, along with a letter endorsing the candidature of Sir Norman Walker as Direct Representative for Scotland.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

XCIV.—THE TREATMENT OF PRURITUS ANI.

PRURITUS ani is the commonest form of localised itching of the skin. It is more frequent in men than in women, and may occur in children, though its incidence is greatest in middle-aged folk of sedentary occupations and in old age when it is often associated with general atrophy of the skin. It is relatively commoner in private practice than in the hospital clinic. Pruritus ani is a subjective symptom of some general or local condition and is not a disease *sui generis*. It is therefore essential, before determining what treatment we should adopt in any given case, to discover first, if possible, its cause and then to remove it or neutralise its action.

General Causes.

Gout is, perhaps, the commonest general cause, for pruritus ani not infrequently alternates with acute attacks of gout. Rheumatism and diabetes, too, are at times responsible for its onset and should receive appropriate treatment. Disorders of the liver, constipation, and impaired digestion, due to over-indulgence in rich foods, may also be exciting factors. Constipation must be treated on general medical lines; aloes, in consequence of its irritant action on the rectum, should not be prescribed. A bland but nutritious diet is indicated. Condiments, pickles, rich sauces, and highly seasoned dishes should be forbidden. Strong coffee and alcohol, except in the strictest moderation, are contra-indicated. Certain other articles of diet—*e.g.*, shell-fish and strawberries—appear at times to provoke attacks and are therefore tabooed. Excessive smoking should be prohibited. When the patient is in a low state of depression and the appetite poor, or there is evidence of neurosis, tonic treatment (quinine and nux vomica) is indicated, together with outdoor exercises—golf, riding, cycling, &c. If there is sleeplessness, bromides, sulphonal, or chloral hydrate may be administered cautiously. In the obviously neurotic case a straight talk may do much good, whilst in some hands hypnotic suggestion has met with marked success.

Local Causes.

Local causes are more often responsible than general ones. The commonest are: catarrh of the rectum with consequent offensive discharge, best treated by injections of warm boric acid lotion; threadworms, the commonest cause of pruritus ani in children, occasionally persist in the adult and should be removed by enemata of strong solutions of common salt or of quassia, followed, if necessary, by 2 to 5 gr. of santonin and a purgative; hæmorrhoids, which should be operated on; polypi and ulcers. Fistulæ if present should be slit up, and any cracks and fissures touched with the caustic pencil or by painting with a 10 per cent. solution of silver nitrate in spt. æther. nit. Warty excrescences should be snipped off. Excessive sweating and tumours in the rectum and pelvis which obstruct the venous circulation are possible causes, and diseases of the genito-urinary apparatus may be either the direct or reflex cause of pruritus ani. Incomplete evacuation of the bowels, and especially want of cleanliness about the anus, should be looked for. *Cleanliness* of the parts after defæcation may be procured by the removal of fæcal matter or mucous discharge with pledgets of cotton-wool moistened with water. After drying a bland dusting powder should be applied. Morning and evening washings with hot water and coal-tar soap are to be commended. The application of a sponge wrung out in hot water sometimes has a very beneficial effect and may procure a night's repose.

Pruritus ani is often very resistant to treatment, but most cases are curable if taken in hand early and if the cause be located. The ailment is too often looked on as a trivial matter. If treatment is delayed until the skin has become indurated, excoriated, and sodden, then, even though the cause be removed, the itching will persist, since the nerves remain in an excitable state due to the pressure exerted on them by the fibrosed skin. It is imperative, therefore, that a careful general and local examination be made before any method of treatment is instituted. Not until after such an examination has been made are we justified in classifying a case as neurotic. The neurosis may be induced by the pruritus ani and the cause still be active though unrevealed. Each case must be dealt with in accordance with the findings and with the idiosyncrasy of the patient.

Persistent or Residual Itching.

Having removed the apparent "cause" without relieving the symptoms, or having failed to find any general or local pathological condition, we are left with the further treatment of the patient. There are many vaunted remedies, but the most expert physician cannot invariably foretell which, if any, will benefit the case in hand. It is necessary to proceed with patience and caution. Whether ointments or lotions will afford the greater relief is impossible to foretell; in spite of statements to the contrary, ointments are frequently of the utmost service.

Carbolic acid often acts like a charm. It may be used as a lotion (1 in 80) or as a liniment (1 in 20 of olive oil), and compresses soaked in these applications used as the symptoms demand. It may be combined with sodium hyposulphite in a lotion, or with cocaine or mercury in ointment or lotion form—e.g., Acid. carbol., gr. xv.; cocainæ hydrochlor., gr. x.; paraffin. moll. ad ℥i. Acid. carbol., gr. xii.; cocainæ hydrochlor., gr. x.; aq. laurocerasi, ℥iii.; aq. rosæ ad ℥i. Acid. carbol., gr. xx.; hyd. perchlor., gr. ii.; ol. lini., ℥i.; paraffin. moll. ad ℥i.

When the itching is intense or when it extends within the rectum, a half grain *cocaine suppository* affords untold relief, but such treatment should be cautiously adopted, especially in a neurotic patient. I have found the ung. gallæ cum opio equally efficient.

Cycloform ointment (5 per cent. with lanoline base) and 5 per cent. *anæsthesin* ointment are also helpful.

Tar has its advocates. The sapo carbonis detergens is desirable for washing the parts and the liq. carb. deterg. or the liq. picis carb. ℥ii.–℥iv. to the pint of water as a lotion. In an ointment combined with mercury and salicylic acid I have found it most useful—e.g., Acid. salicyl., gr. xv.; liq. picis carb., ♏xx.; hydrarg. ammon., gr. xv.; paraffin. moll.; adipis lanæ hydr., aa ℥ss.

Mercury is the most useful antiseptic, either in an ointment (calomel ℥ss. ad ℥i. of vaseline or hydrarg. ammon., gr. xv. ad ℥i. of benzoated lard) or in the following lotion: Hydrarg. perchlor., gr. iii.; glycerini, ℥v.; aq. chloroformi, ad ℥x. After the morning toilet calomel in powder may be dusted on the parts

or, better still, rubbed into the affected region by the patient. After the daily evacuation of the bowels the patient is instructed to clean and dry the parts and then to rub in 20 gr. of calomel. Such treatment, repeated for a few days, has in some instances produced most gratifying results.

Various means may be adopted for reducing the thickening of the peri-anal skin. *Salicylic acid* (6 per cent. in 50 per cent. alcohol) may be used as a paint. Twenty-second applications of *solid carbon dioxide*, with a simple protective ointment afterwards, may also be used. Carefully painting the parts with pure carbolic acid and applying Lassar's paste to the raw surface resulting from the subsequent exfoliation is an easy and convenient method. A more drastic means, necessitating a general anæsthetic, advocated by Mitchell Banks, is the use of the actual cautery to effect a superficial burn. The operation is followed by the use of the lotion of bicarbonate of soda (1 in 8) as a soothing medication and the application of zinc cream. These latter methods necessitate keeping the patient in bed till the parts are healed, and I seldom resort to them.

X Rays.

Radiation by means of the X rays I now use as the routine method of treatment for pruritus ani. Not only have the rays a marked anti-pruritic action, but they also reduce induration of the skin. X rays seem to have entirely superseded surgical division of the nerves, and not a few cases which have recurred after operation have remained permanently well after but a few exposures to the X rays. The treatment should only be undertaken by a careful and competent radio-therapeutist, for over-exposure will produce a far greater evil and bring a valuable therapeutic agent into undeserved condemnation. Four unfiltered doses of a half pastille each are given at fortnightly intervals, and then after a month's rest two further exposures if necessary. The surrounding parts should, of course, be efficiently protected. An antiseptic ointment or lotion is prescribed when the circumstances demand.

The high-frequency *electrode* has proved efficient in some neurotic cases. Dr. J. M. H. MacLeod speaks well of *zinc ionisation* where superficial abrasions are present. The ionisation has definite astringent and anti-pruritic properties. MacLeod describes the procedure as follows: "A piece of lint the size of a penny is soaked in 2 per cent. sulphate of zinc solution and applied to the affected skin, the positive pole of the battery with a solid zinc electrode is pressed against the lint, while the negative electrode is held by the patient, and a current of a few milliampères is passed for ten minutes."

Vaccines.

Some few years ago the late Dr. D. H. Murray, of Syracuse, N.Y., met with considerable success by the use of autogenous vaccines made from the *Streptococcus fæcalis*. His results have been confirmed by other American observers, but this treatment has not met with much approval in this country. Latterly, however, Dr. C. E. Jenkins, of Manchester, has adopted it with favourable results in a small series of patients. Dr. Jenkins gives seven injections at weekly intervals, using a residual vaccine. This method seems worthy of further trial in obstinate cases. It should not, however, be adopted before all other pathological conditions have been excluded.

LOUIS SAVATARD, L.S.A. Lond.,
Hon. Physician, Manchester and Salford Hospital for Diseases of the Skin.

EASTBOURNE EAR, NOSE, AND THROAT HOSPITAL.—At the annual meeting of this institution on Oct. 24th the governors reported that the reserve fund had been increased to £1750. The needs of the hospital were growing. During the year the number of out-patients was 2257 and the in-patients 268. The number of operations performed was 245. The balance-sheet showed a balance to be carried forward of £120. Mr. T. Garton Jenkins was re-elected president.

Special Articles.

ON THE QUESTION OF BIRTH CONTROL IN SOME OF ITS STATISTICAL ASPECTS.

BY JOHN BROWNLEE, M.D., D.Sc. GLASG.,
DIRECTOR OF STATISTICS, MEDICAL RESEARCH COUNCIL.

I PROPOSE in this paper to examine some of the statistics relating to population in England and Wales. This population is at present tending to become stationary. Prof. Bowley has recently shown that with a birth-rate equivalent to the average of the three years 1921–23 and a death-rate similar to that in 1911, the population will attain a maximum about 1971 and thereafter slowly decline, the maximum for Great Britain being 49,000,000 as against 42,700,000 in 1921. It is unlikely that this maximum will be attained as it is most probable that the annual number of emigrants will be at least 120,000, in which case a maximum population at a lower level may be reached in the course of 15 or 20 years.

The discussion falls under three headings: (1) the relation of a high birth-rate to infantile mortality; (2) the age at marriage in relation to fertility; and (3) how far the fall in fertility in the last 50 years has reduced the chance of the country becoming more seriously over-populated than it is at present.

Relation of High Birth-rate to Infantile Mortality.

The question of the relation of the infantile mortality to the birth-rate has been the subject of inquiry by a number of statisticians. Of these it is only necessary to refer to Dr. Major Greenwood.[1] In his paper on this subject in 1912 he shows that the correlation between the infantile mortality and the birth-rate varies very largely according to the method in which the calculations are made. Thus if the crude birth-rate is taken, the correlation is 0·81; if the birth-rate is based upon all women between the ages of 15–45 years it falls to 0·64; if it is based upon wives aged 15–45 years it becomes 0·53, while the corrected birth-rate, as given by Stevenson and Newsholme, gives a correlation of 0·36. He also found, taking the birth-rates based on all women at the ages 15–60 years in districts of Bavaria, that the correlation was 0·68. Dr. Greenwood, however, in this paper was investigating certain social problems and not making a special inquiry into the actual influence of infantile mortality on fertility or the reverse.

I am doubtful whether there is any real relationship between infantile mortality and fertility. Of course, it is probable that a high infantile mortality, by limiting the duration of nursing may permit a few extra births, but even supposing that the infantile mortality were 200 per 1000, the increase in the number of births due to this would be at most somewhere in the neighbourhood of 1 in 10 and the differences found in different districts are very much greater than this. To investigate the relationship is, however, difficult in the sense that the fallacies due to the use of any known method have not been sufficiently examined. Further, it is necessary to select data which are not open to the suspicion that restriction of birth is being practised. If present-day statistics were chosen, as there must be more restriction of births among the better classes, where the infantile mortality is low, a correlation between high fertility and high infantile mortality would at once be obtained. To use such figures is to work with loaded dice. To avoid this difficulty I have gone back to the statistics of 1871, when the birth-rate of England was about its maximum and when figures may be said to be free from the objection just noted.

[1] Greenwood, M., and Brown, J. W.: An Examination of Some Factors Influencing the Rate of Infantile Mortality, Journal of Hygiene, 1912, xii., No. 1.

I have confined the inquiry to districts north of the Humber and the Dee because the infantile mortality south of this region obeys a different law, and if the south of England were to be considered it must be taken by itself. The northern counties referred to contain 131 registration districts of very varied character, the infantile mortality varying from 78 to 220, a very wide range. The crude birth-rate, that commonly taken as the measure of the fertility, is here of no use because the towns of these districts in 1870 contained a very high percentage of young married women. The proportion of legitimate births to the married women between the ages of 15 and 45 years is a better guide, but requires correction, as the proportion of young married women to older married women at child-bearing ages varies very markedly from town to country. The application of a fertility factor as advocated by Stevenson and Newsholme gives a better measure, but the consequences of using this fertility factor have not yet been thoroughly worked out. Two sets of fertility-rates are known for this country, that for the cities of Glasgow and Edinburgh, given by the Registrar-General for Scotland and used by Dr. Matthews Duncan for the year 1855, and that given for Aberdeen for the Census year of 1911 by Dr. M. Hay. In association with these may be placed the Swedish fertility-rates used by Stevenson and Newsholme. The three sets of figures are given in Table I. The

TABLE I.—*Fertility-rate among Married Women at Different Age-periods.*

Age of the mother.	Edinburgh and Glasgow, 1855. (Dr. Matthews Duncan.)	Aberdeen, 1911. (Dr. Hay.)	Sweden, 1911.
15–19	0·5000	0·5000	0·5181
20–24	0·4179	0·3740	0·4514
25–29	0·3464	0·3250	0·3753
30–34	0·2656	0·2060	0·3118
35–39	0·2039	0·1450	0·2504
40–44	0·0804	0·0690	0·1423
45–49	0·0127	0·0080	0·0200

figures measure the chance that a married woman at each age bears a child within a year. It will be noticed that among married women between 15 and 20 years of age the fertility in the three sets of figures is the same, but the rate of decline with age differs considerably. Prof. Tait long ago noticed that the rate of decline in fertility follows very closely a straight line, and for purposes of calculation it may probably be taken as a straight line without introducing any very serious error. To use fertility ratios, the numbers of married women at each age-period were taken out for each registration district in the region indicated and also the numbers of legitimate births for the three years 1870, 1871, and 1872. The fertility figures of Dr. Matthews Duncan were multiplied into the corresponding numbers of married women and the theoretical number of births calculated and compared with the average number of births in the three years in question. The ratio of the actual births to the theoretical was then calculated, and this ratio I call for the purpose of this paper the "fertility ratio."

Secondly, as the decline of fertility in these three cases is very nearly a straight line, and as its starting value is the same, it has been assumed that this holds in all districts. Thus, if the fall in fertility with each period of five years be denoted by D, the fertility between 15 and 20 years is taken as 0·50, that between 20 and 25 years becomes 0·50 −D, between 25 and 30 years, 0·50 −2D, and so on. Applying these ratios to the number of married women and comparing with the number of births, it is easy to obtain the value of D for each district. This value I call for the purpose of this paper the "fertility constant."

Other factors, however, come into this inquiry. One of these is the density of population. This has been measured in the calculations by the logarithm of the number of acres per person in each district, as it is found that this measure gives linear regressions. Another factor already referred to is the proportion of young married women to those married at fertile ages. This has been measured by taking the proportion between 15 and 25 years to the total number of married women between 15 and 45 years. It would have been more satisfactory to have made the division at 30 years, but the statistics for this age are not available. A third important factor is the proportion of married women at fertile ages to the whole population.

We are now in a position to examine the results obtained under these conditions and to discuss thereafter what trust is to be placed in their accuracy. Taking the "fertility ratio" measured as described above, it is found that the correlation between this and infantile mortality is high and negative, being equal to −0·497, that between the infantile mortality and the "fertility constant" as described above, −0·301, while that between the ratio of the births to the married women between 15 and 45 years of age and infantile mortality is +0·248. These different methods thus give very various answers. Both the infantile mortality and the fertility are, however, very highly correlated with the number of acres per person. This factor determines both high infantile mortality and low fertility, the correlation being, respectively, −0·855 and +0·619. It may be noted that this relation of density of population to fertility is in exact accordance with Prof. Pearl's experiments with the fruit-fly *Drosophila*.[1] When the partial correlation coefficient between the fertility and the infantile mortality, keeping the logarithm of the acreage per person constant, is calculated, a coefficient of +0·08 arises. Another measure of the degree of urbanisation is the proportion of married women between 15 and 45 years of age to the total population. If, then, the fertility and infantile mortality are correlated, keeping the proportion of married women constant, the partial coefficient of correlation becomes −0·11. Taking next the "fertility constant" and infantile mortality and making density constant, a correlation coefficient of +0·19 is obtained. The remaining correlation—namely, that between the proportion of births to married women at fertile ages and infantile mortality—changes in the same way. Here the disturbing factor is the proportion of young married women to the whole married at fertile ages,

TABLE II.

First correlations.		Partial correlations.		First correlations used in calculating partial correlations.	
r_{FI}	= −0·497	$r_{FI.M}$	= −0·11	r_{-DA}	= +0·455
				r_{MI}	= +0·772
		$r_{FI.A}$	= +0·08	r_{FM}	= −0·569
r_{-DI}	= −0·301	$r_{-DI.A}$	= +0·19	r_{IA}	= −0·855
r_{BI}	= +0·248	$r_{BI.W}$	= −0·13	r_{MA}	= −0·799
				r_{FA}	= +0·619
				r_{WI}	= +0·622
				r_{WB}	= +0·539

A = Logarithm of the number of acres per person.
I = Infantile mortality.
B = Ratio of births to married women aged 15–45 years.
F = Fertility ratio.
D = Decline for five-yearly period in fertility: to be measured as −D.
M = Proportion of married women at fertile ages to total population.
W = Proportion of wives under 25 years of age to the whole married women at fertile ages.

the proportion in the country being considerably lower than in the towns. When this factor is made constant the correlation coefficient becomes −0·13 (Table II.). Thus, with three different measures

[1] Pearl, R., and Parker, S. L.: On the Influence of Density of Population upon the Rate or Reproduction of Drosphila, National Academy of Sciences, vol. viii., No. 7, pp. 212–219.

of fertility, when certain corrections are made, the four values of the partial correlation coefficient are all in the neighbourhood of zero, which is the value of the average. It may thus be said that the connexion between fertility and infantile mortality is at least very small.

This result is, I think, important. It strikes straight at one of the arguments for limitation of a family—namely, that it is better, say, to have three or four healthy children than five or six unhealthy. Conditions being equal, the size of the family has nothing to do with the infantile death-rate.

The Age at Marriage in Relation to Fertility.

The next point to be considered is how far fertility has been influenced by the age of marriage. This I discussed recently in THE LANCET,[3] but take the advantage of using the figures of the 1921 Census to bring the matter up to date. It is commonly stated that at the present moment the age of marriage has risen. To test this I have taken the percentages married at the different age-periods in the 1911 Census and applied these ratios to the numbers of women living at each age-group registered in the 1921 Census. It will be seen that if the numbers married between 15 and 30 years had been as in 1911, there would have been 1,337,100 married women between 15 and 30 years of age, whereas the number enumerated was 1,411,900, the latter being much in excess. In the same way the corresponding figures for married women between 30 and 45 years is 3,214,900, as against 3,184,000. The figures for each age-group are given in Table III. Thus, instead of the population at

TABLE III.—*Numbers of Married Women in Hundreds Estimated on the Theory that the Percentage at Each Age Married in 1911 was Maintained and those Actually Found by Enumeration.*

TABLE IV.—*Numbers of Married Women in Hundreds in the Life-Table Population of 1911, the Total Population being Taken as 36,000,000.*

III.				IV.		
Age.	1911.	1921—		Age.	Total.	Population of females married.
		Theoretical as in 1911.	Actual.			
15–19	201	212	311	15–19	13,838	165
20–24	4,041	4,114	4,597	20–24	13,638	3,294
25–29	9,064	9,045	9,210	25–29	13,410	7,487
30–34	10,570	10,694	10,595	30–34	13,140	9,251
35–39	10,154	11,056	10,893	35–39	12,807	9,619
40–44	8,735	10,399	10,351	40–44	12,397	9,355

the present moment having a higher age at marriage it has a lower. Consequently, this factor does not come in as producing a decline in the birth-rate.

The Birth-rate in Relation to Population.

The number of births which might be expected from the population of 1921 now falls to be considered. Using the fertility figures employed by Dr. Stevenson and Sir Arthur Newsholme in their investigations—namely, those for Sweden in 1891, figures which closely represent the facts in England in 1871—there should be 1,338,000 legitimate births. Taking Dr. Hay's figures for Aberdeen in 1911, the number becomes 942,000. The average actual number of legitimate births for the three years about the Census is 800,000, but for the year 1923 the births only numbered 727,000. The ratio of the present fertility of England to that of England in 1871 is thus 0·55. The fall in the birth-rate is still going on, for the number of legitimate births in the first two quarters of 1924 is 372,000, as against 390,000 last year.

It now remains to consider the distribution of a birth-rate necessary to maintain a stationary population. For this the determination of the "fertility constant" seems to be the only method. When the "fertility constant" is determined with the number of births in 1923 and applied to the Census population of 1921, it is found to be 0·105 in place of 0·060 in 1871. We thus apply fertility-rates, 0·500, 0·395, 0·280, &c., at the successive age-periods.

Let us now consider a life-table population. The necessary data are contained in the life-table for 1910–1912, calculated by Mr. King. The total population has been assumed to be 36,000,000, as in 1911. Assuming the same marriage constitution of the population as in 1921, the number of married women at each age has been calculated (Table IV.). The application of the fertility-rates given at the end of the preceding paragraph to this life-table population of married women gives 607,000 legitimate births. To this total the proportion of illegitimate births has to be allowed for, raising this number to 632,000 births. The number of births required to maintain a constant population of 36,000,000, which is a life-table population in the health conditions of 1911, is 675,000, so that the fertility of 1923 would not suffice to maintain the population on the basis of health of 1911. The infantile mortality has fallen, however, very considerably. Taking a very liberal allowance in this regard by assuming that the infantile mortality may be taken as 60 in place of 120, as in 1911, a smaller number of births will suffice to maintain the population. As a matter of fact, with this allowance it works out at 632,000, the exact figure just obtained.

The difficulties of the future in this country are very great. Without emigration the population is bound to increase for a time, and with 1,000,000 people out of work that seems a very serious prospect. But if the fertility declines much further, a more serious problem will ultimately arise. Nothing like a stationary population in the life-table sense can, of course, be expected for a very long period. At present a larger elderly population requiring maintenance is steadily accumulating, while there is a smaller proportion of persons at working ages. The prospect instead of being one which tends to a higher standard of living, would seem almost necessarily to lead to a lower.

Conclusion.

The results of this investigation are, I think, three.

1. When the data are taken before restriction of birth became a practical factor, there is no evidence that large families were more unhealthy than small ones, and the statement that it is better to have three healthy children than six unhealthy ones has no apparent foundation.

2. That in place of marriage taking place at a higher age, it has, probably due to the war, taken place at a lower age than in 1911, so that the population is in a more favourable condition for the production of children now than then.

3. That in place of this being the time for preaching control of birth, the opposite is the case. The time for preaching birth control has passed. Whether due to birth control or not, and I think the much larger part of the fall is due to race physiology, the birth-rate has reached the level required, and any further fall will very seriously endanger the national life.

[3] THE LANCET, 1922, ii., 223.

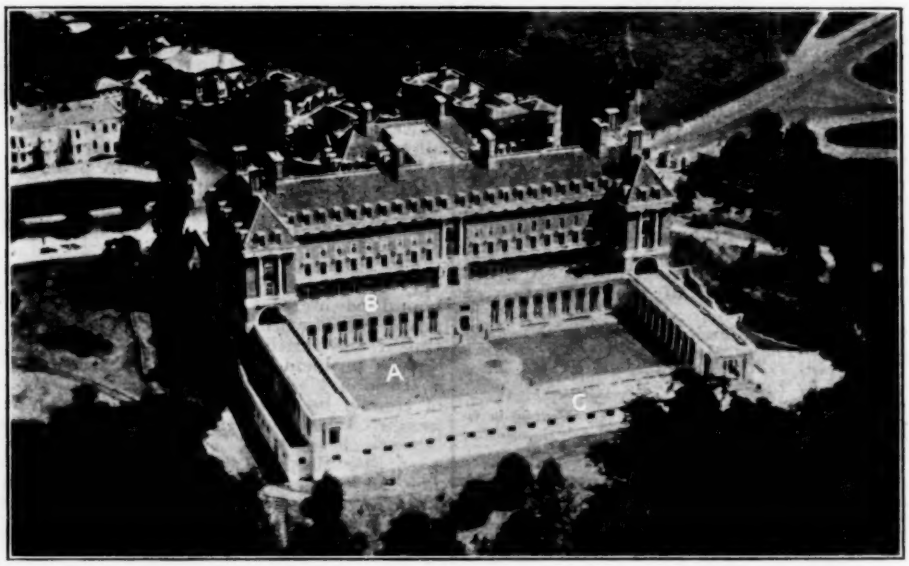
MEDICAL GOLFING SOCIETY.—The autumn meeting was held at Princes', Sandwich, on Oct. 18th and 19th. Seventy members took part in the competitions, and the meeting was a very successful one. All competitions were played under handicap. The results were as follows: Best Return *v.* Bogey (cup presented by Mr. Ernest Clarke, the President): T. H. P. Kolesar, C. Ilott, and C. E. Finny, all square; won on replay by Mr. T. H. P. Kolesar. Foursomes *v.* Bogey (prizes presented by Dr. J. Grace): E. Ravensworth Hart and H. W. Carson, and H. D. Gillies and W. H. Lamplough; won on replay by the first-named couple. Canny Ryall Cup (Medal play): H. D. Gillies, 72+2=74; G. S. Moriarity, 87−8=79.

THE STAR AND GARTER HOME
FOR DISABLED SAILORS AND SOLDIERS.

(BY A SPECIAL CORRESPONDENT.)

THIS beautiful Home, in its unrivalled position on the banks of the Thames at Richmond, Surrey, has been built to provide comfortable, it may almost be said sumptuous, accommodation for some 180 disabled and paralysed men of the Services. It has taken six years to build. The money for the site was found by the Auctioneers and Estate Agents' Institute, and for the building by the British Women's Hospital Committee. It is maintained by an endowment fund formed by contributions from the "Women of the Empire." It is thus the "Women's Memorial of the Great War." Sir Edwin Cooper, the hon. architect, has built for these poor fighting men, broken in the wars, a palace rather than a mere hospital, and he has kept ever in view the needs of the stretchers, beds, and wheeled chairs, to which so many of the inmates are condemned for life, by providing wide doors, uninterrupted floors, broad bed terraces, and so on. The main entrance is at the Richmond Gate of Richmond Park, and opposite to it is Ancaster House, which has been remodelled within to be a nurses' home at one end, and at the other a residence for the commandant, Lieut.-Colonel E. L. Gowlland, R.A.M.C.

THE STAR AND GARTER HOME, RICHMOND.



The Chapel (C) is seen in the foreground with the Garden Terrace (A) behind and the Bed Terrace (B) looking down upon it.

[Photo by Aerofilms, Ltd.

On the upper ground-floor is the 24-foot wide memorial entrance-hall, which runs through the building to the bed terrace; polished slabs of Italian marble from Subiaco form the floor and walls, the roof being supported on 14 monoliths of the same material. The great marble staircase opens off the hall to the right, while on the left will stand the marble group, "Patriotism Recording Sacrifice," below three coloured windows representing St. George, Faith, and Charity. On each side of the hall are electric automatic lifts to carry beds, and beyond are two lofty 18-bed wards, about 40 ft. by 80 ft., giving plenty of space for nursing. Each man has a bed-table with a second shelf and two drawers. The beds have 8-inch rubber-tyred wheels at the head end, and handles at the foot, hinged to fall and be out of the way when not required, so that the nurse can easily wheel a patient to and from the bed terrace, even if a water-bed is being used. There is direct access to the terrace through wide casement doors. Each patient has his own bell, ringing to the nurse's room, and is provided with an electric-light switch and an overhead bed-lift. There is a power circuit plug by each bed to facilitate electrical treatment. The ward lavatories are on the north side, projecting into an inner court, and cross ventilation of the ward has been arranged. The south side of the ward opens in its entire extent on to the bed terrace, 21 ft. wide and 220 ft. long, whence the renowned view over the Thames valley can be enjoyed in fine weather. On this upper ground-floor also, on either side of the entrance-door, there are, to the right, the matron's office, diathermy, electrical, and other treatment rooms, the X ray department, the operating theatre, the clinical laboratory, and a ward of four beds with its annexes. On the left are the administrative offices, the dispensary, and another ward of four beds. On the north there is a mezzanine floor for staff, dining rooms, stores, telephone exchange, and quarters for the steward and engineer.

Below this is the lower ground-floor, where are the patients' dining-room, 94 ft. by 54 ft., and 20 ft. high (giving ample space for each patient, though so many are in wheeled chairs), and the common room of similar size facing south-west and opening on to the garden terrace lawn, which lies between protected colonnades or loggias. In the servery attention was directed to a convenient handle for the larger table-drawers, a wooden bar running nearly the whole length, so that the drawer can be opened either with one or both hands, the bar serving also as a towel rail. Adjoining the common room, which is supplied with newspapers, there are a canteen and a library containing already over a thousand books. At the outer corner of each of these rooms is a cosy "quiet" room, as comfortable and well furnished as the members' smoking room in a good club. The northern side of this floor is occupied by stores, &c. The main kitchen, measuring 50 ft. by 50 ft., has a great floor space and is well equipped, well lighted, and thoroughly

ventilated. In the sculleries teak sinks are used to diminish breakage of crockery. They are said to give satisfaction, and to be no harder to clean than the usual fire-clay pattern. Below the garden terrace to the left front of the Home is the Cowdray Memorial Chapel, given in remembrance of Lord Cowdray's son, killed in the war. It is in marble, with an ever-open grille in the door allowing a glimpse of the altar from the outside. On the ground-floor there is also a recreation room with a billiard table, in which kinematograph exhibitions may be held, further the Zander room with mechanical massage and exercising machines, and beyond these are the workshops for employing such patients as may be possible. On this floor also are the mortuary and the post-mortem room. There is a garage for patients' hand-wheel and motor bath-chairs; on the day of my visit one, electrically propelled, had just been received. The boiler room contains two Lancashire boilers, coke-fired, for the heating of the establishment. All water is softened (Permutit system) and there are calorifiers in two sets, one providing hot water for the lavatory supply, the other for the radiators throughout the building.

On the first floor are the residential quarters of the matron and the secretary, and a sitting-room for nurses. The rest is for the accommodation of patients, mostly in single rooms, each of which is supplied with a fixed basin. The second and third floors are wholly devoted to patients. The fourth floor is entirely for the accommodation of the staff. Here in quiet are the rooms for the night nurses, the others having their rooms in Ancaster House, across the road, where they have a garden and tennis-court. As the patients demand much nursing the nursing staff is large. On the fifth floor is an isolation and observation ward. Ventilation has been most carefully considered. The entire building is of fire-proof construction. The furniture and cabinet work throughout is of Japanese oak, designed by the architect, highly finished, and most comfortable. Electric lighting is taken from the local supply company.

In inspecting a hospital it is often rather hard to be sure of the quality of the meals, but your correspondent got an eminently satisfactory statement from one of the patients: "The boys are tickled to death at the food, they never get the same thing twice." The profession may rest assured that here is, in fact, a worthy home for heroes.

PRESERVATIVES IN FOOD.

FINAL REPORT OF THE DEPARTMENTAL COMMITTEE.

IN July, 1923, Mr. Neville Chamberlain, then Minister of Health, appointed a Committee to inquire into the use of preservatives and colouring matters in food, and to report—(1) Whether the use of such materials, or any of them, for the preservation and colouring of food, is injurious to health, and, if so, in what quantities does their use become injurious; (2) whether it should be required that the presence of such materials, and the quantities present, in food offered or exposed for sale should be declared.

The members of this Committee were: Sir Horace Monro (chairman), Prof. W. E. Dixon, M.D., F.R.S., Sir David Hall, F.R.S., Dr. J. M. Hamill, Mr. O. Hehner, F.I.C., Prof. F. G. Hopkins, M.B., F.R.S., Dr. G. R. Leighton, Dr. A. P. Luff, Dr. C. Porter, Mr. G. Stubbs, F.I.C., with Mr. A. M. Legge, of the Ministry of Health (secretary). Mr. P. A. Ellis Richards, F.I.C., later took the place of Mr. Hehner.

This Departmental Committee issued an interim report[1] on the treatment of chilled beef and other foods with formaldehyde, and has now brought in its final report,[2] which is unanimous except in one small particular.

[1] THE LANCET, August 16th, p. 329.
[2] H.M. Stationery Office. 1s. 6d.

The Committee met on 41 days and heard oral evidence from 101 witnesses, including medical officers of health and public analysts, physicians, pharmacologists, pathologists, chemists, and a great number of persons connected with the trades which would be affected by any restrictive action in connexion with the use of preservatives or colouring matters in food, including manufacturers, importers, wholesale dealers, and retailers.

Recommendations of the 1899 Committee.

In 1899 a Committee was appointed by Mr. Chaplin, then President of the Local Government Board, with Sir Herbert Maxwell as chairman, to inquire into the use of preservatives and colouring matters in food and their effect on health. The report of this Committee was issued[3] in 1901 (Cd. 833). The preservatives then stated to be in use were very much the same as those now employed in this country, viz.: Boric or boracic acid and borates, Sulphurous acid and sulphites, Fluorides (to a very limited extent), Benzoic acid and benzoates (to a very limited extent), Salicylic acid, Formalin or formaldehyde.

The recommendations which this Committee made were as follows:—

(*a*) That the use of formaldehyde or formalin, or preparations thereof in foods or drinks be absolutely prohibited, and that salicylic acid be not used in a greater proportion than 1 gr. per pint in liquid food and 1 gr. per pound in solid food. Its presence in all cases to be declared.

(*b*) That the use of any preservative or colouring matter whatever in milk offered for sale in the United Kingdom be constituted an offence under the Sale of Food and Drugs Acts.

(*c*) That the only preservative which it shall be lawful to use in cream be boric acid or mixtures of boric acid and borax, and in amount not exceeding 0·25 per cent. expressed as boric acid. The amount of such preservative to be notified by a label on the vessel.

(*d*) That the only preservative permitted to be used in butter and margarine be boric acid or mixtures of boric acid and borax, to be used in proportions not exceeding 0·5 per cent. expressed as boric acid.

(*e*) That in the case of all dietetic preparations intended for the use of invalids or infants chemical preservatives of all kinds be prohibited.

(*f*) That the use of copper salts in the so-called greening of preserved foods be prohibited.

(*g*) That means be provided either by the establishment of a separate Court of Reference or by the imposition of more direct obligation on the Local Government Board to exercise supervision over the use of preservatives and colouring matters in foods, and to prepare schedules of such as may be considered inimical to the public health.

The report was unanimous save that one member of the Committee considered that an amount not exceeding half a grain of metallic copper per pound might be permitted in preserved vegetables, its presence being in every case declared.

Action Taken in Other Countries.

The report summarises in general terms the action taken in different countries with regard to different preservatives:—

(i) Every country or State which has legislated on the subject of preservatives prohibits the use of fluorides and formaldehyde as preservatives.

(ii) Boron preservatives are absolutely prohibited by the United States of America and by Sweden. They are permitted specifically, in certain dairy products only, in Australia, New Zealand and Canada, while their use is apparently tolerated to some extent in Holland.

(iii) Sulphur dioxide is prohibited in meat or meat products in every country whose laws and regulations we have had the opportunity of studying, except in New Zealand and in the draft regulations which have been recently under consideration by the States of the Australian Commonwealth, where it is allowed in minced meat and certain meat preparations. The restrictions are generally less severe in the case of the preservation of fruits and fruit products, and sulphur dioxide is commonly permitted in wine, beer, cider and non-alcoholic drinks in limited amounts.

(iv) Benzoic acid is rarely referred to, but is permitted generally, subject to declaration, under the Federal law of the United States; in Canada except in meat and subject

[3] THE LANCET, 1901, ii., 1682.

to a limit of 1 part in 1000 and to declaration of its presence; in Australia in the same quantities and products as sulphur dioxide; in Denmark in sausages, and in Uruguay in canned meats and meat products.

(v) Salicylic acid is permitted in a few instances, sometimes as a substitute for sulphur dioxide, in concentrations varying between 1 in 5000 and 1 in 3500.

No country, except Japan and certain of the United States of America, is absolutely intolerant of preservatives of any kind in all foods, but the extent to which preservatives are limited by law seems to indicate that the problem of keeping foods without resort to chemical preservatives has not been generally found to be insoluble. As regards colouring matters copper is prohibited in green vegetables in the United States of America, and in Australia, Canada, and New Zealand; under the laws of other countries which deal with the subject the amount permitted is generally limited to one part in ten thousand, equivalent to 0·7 gr. per pound. Switzerland and Japan have published lists of prohibited colours, and Belgium lists both of prohibited and of permitted colours. Other countries, including the United States of America, Uruguay, Sweden, Canada, Italy, Spain, France, Denmark, the Australian States, and New Zealand, have issued lists of permitted colours, with power to add to the lists. The number of synthetic colours permitted varies between 10 permitted by New Zealand and 21 allowed under the French law.

General Principles.

The report starts from the basis of three propositions, considered to be generally accepted: (1) That it is undesirable to add to articles of food any material not of the nature, substance, and quality of food; (2) that if for commercial or other reasons the addition is necessary, it should be limited to the minimum required to effect its purpose; (3) that if it can be shown that some of these materials are less undesirable than others, preference should be given to the employment of the less undesirable materials.

Definition of Preservative.—In the term "preservative" the Committee does not include salt, saltpetre, sugar, vinegar, acetic acid, alcohol and spices, or the minute quantities of preservative agents introduced by the process of curing known as "smoking," nor does it include substances which, though they may have some preservative properties, are added to food for other than preservative purposes, and in the amounts in which they may be used in food possess preservative properties in so slight a degree that they cannot be regarded as commercially practicable preservatives. The term "preservative" is interpreted in the report as including every other substance which when added to food has the property of preventing, arresting, delaying, or masking fermentation or putrefaction of food.

The first proposition stated is self-evident. The report deals in succession with the question of the possible risk to health from the chemical action on the human body of the substances employed as preservatives. Apart from such risk these substances may mask unsoundness in food or be a cloak for careless or inexpert methods of production, storage, or distribution. It is recognised that the problem is not simple. Great Britain is in some ways peculiarly situated. A large proportion of the food of her people is imported, much of it from long distances, and on arrival at the ports has to be distributed to all parts of the country, while the provision of cold storage and cold transport is far less than in some other countries. Home producers have urged that the ultimate point in cleanliness and the maximum of efficiency have been attained in their factories, and yet the food cannot be relied upon to keep for the necessary period between preparation and consumption without preservatives. Nevertheless the Committee is confident that in the case of many foods trade methods could be adjusted to eliminate preservatives without serious inconvenience to traders or consumers.

Conclusions and Recommendations.

Permissible Preservatives.—After a consideration of all the evidence the Committee concludes that preservatives should be prohibited in all articles of food and drink offered or exposed for sale whether manufactured in this country or imported, *except that:*

(*a*) *Sulphur dioxide* only should be permitted (1) in sausages in amounts not exceeding 3 gr. per pound; (2) in jam in amounts not exceeding 0·3 gr. per pound; (3) in dried fruit in amounts not exceeding 7 gr. per pound; (4) in preserved (but not dried) whole fruit or fruit pulp in amounts not exceeding 5 gr. per pound; (5) in beer and cider whether in bottle or in cask in amounts not exceeding 5 gr. per gallon; (6) in alcoholic wines, non-alcoholic wines and cordials, and fruit juices, sweetened and unsweetened, in amounts not exceeding 3 gr. per pint.

(*b*) *Benzoic acid* only should be permitted (1) in coffee extract in amounts not exceeding 3 gr. per pound; (2) in non-alcoholic wines and cordials, and sweetened and unsweetened fruit juices (as an alternative to sulphur dioxide), in amounts not exceeding 5 gr. per pint; (3) in sweetened mineral waters and in brewed ginger beer in amounts not exceeding 1 gr. per pint.

Sale of Preservatives.—The sale of any preparation as a food preservative or for use in such circumstances that it may be introduced into food should be declared illegal unless such preparation (*a*) bears a description clearly indicating its composition and strength; (*b*) is free from impurities and in particular contains not more than 1/100th part of 1 gr. of arsenic per pound or more than 1/7th part of 1 gr. of lead per pound.

Declaration of Nature and Quantity.—The use of preservatives so far as they are permitted should be upon the condition that the nature and quantity of the preservative present in the article of food should be declared[4] in a manner prescribed by the Minister of Health. In cases in which the declaration of the preservative might be difficult to enforce or might result in undue harm to the industry without compensating advantage to the consumer, exception to this requirement might be made, but the exception should in no circumstances apply to sausages.

Copper Salt.—The employment of a copper salt to colour or preserve the colour of peas and other vegetables should be prohibited.

Schedule of Colouring Matters.—A schedule should be issued by the Minister of Health after such inquiry as is necessary of colouring matters the use of which may be considered non-injurious to health, such schedule to be subject to amendment or extension from time to time as occasion may require. Within a suitable period after the publication of this list the use of any other colouring matter should be prohibited unless and until it shall have been approved by the Minister.

Period of Grace.—Before the prohibition of preservatives or of colouring matters in food (including the use of copper salts for the so-called greening of vegetables) is enforced, a period of grace should be allowed sufficient to enable manufacturers and importers to adjust their methods and processes and to allow stocks to be cleared.

Storage and Transport.—Improved methods in the storage and transport of food by rail, road and water, especially as regards the use of refrigeration and cool-air storage, are urgently required.

[4] Sir David Hall regards it impracticable from a trade point of view and unnecessary for the protection of the public health to enforce a declaration of the presence of the permissible quantity of sulphur dioxide in beer, cider, wines, and mineral waters.

Regulations to Bind Courts.—It should be provided by law that any regulations or statute prohibiting or limiting the use of preservatives and colouring matters should bind the courts in proceedings taken under the Sale of Food and Drugs Act in respect of their use.

Expedited Prosecution.—An amendment of the law is required to render more expeditious the prosecution of a person actually responsible for offences under these Acts, where a warranty defence is pleaded.

Right of Inspection.—Further powers of control by registration, licensing, or inspection should be given to local authorities in relation to all places concerned in the production, sale, storage, and distribution of food.

Amendments of Law.

The Committee regards the present position of the law in regard to preservatives and colouring matters as far from satisfactory. Under the Sale of Food and Drugs Act, 1875, the proof that a preservative or colouring matter mixed with an article renders it injurious to health is not an easy or expeditious matter and when established in one court is not necessarily effective in other courts. Expert evidence is given on both sides, and the court has to decide on the conflict of evidence whether an offence has or has not been committed. Each case has to be decided on the evidence laid before the particular court, as to the probability of injury to health, and there is no recognised standard by which the court is bound. Neither traders nor local authorities nor the public can definitely know what is permissible under the law and what is not. Many authorities hesitate to undertake prosecutions under the present law except in cases where the amount of preservative used is grossly excessive. For instance, the previous Departmental Committee in 1901 recommended that the limit of boron preservative in cream should be 0·25 per cent., the Local Government Board in 1917 adopted a limit of 0·4 per cent., the presence of 0·3157 of boric acid per cent. was held at the Clerkenwell Quarter Sessions in 1913 to be injurious, while other authorities do not proceed unless the amount exceeds 0·4 per cent.

Whatever may be the actual measure of control taken, the Committee regards it as eminently desirable that it should be clearly embodied in regulations having the force of law. Any prohibitions or limitations imposed by the regulations should bind the courts in proceedings taken under the Sale of Food and Drugs Acts. If this were done, traders and the public generally would know what was permissible and what was not, and there would be no conflict of expert evidence on the question whether the amount of preservative or colouring matter was or was not injurious to health.

Improved legal means for dealing with offences connected with the adulteration of food would not, the Committee considers, quite cover the whole ground. The suggestion that sulphur dioxide might be permitted as a preservative in sausages needs a special safeguard against the risk that tainted ingredients may be used in their manufacture, the unsoundness of which may be masked by the preservative. Such permission could only safely be accorded if local authorities are empowered to inspect the places where such articles are prepared, together with the methods of preparation and the materials used. Cleanliness of materials and methods is a matter of prime importance in the production of food, and the use of preservatives is apt to tend to the perpetuation of bad methods. If suitable regulations were made for securing ventilation, cleanliness of premises and appliances, the use of clean and wholesome materials, and the like, in all places where food is prepared and retailed, including eating houses and restaurants, a great deal would be gained. Coupled with the power to make such regulations there should be a power of inspecting all places to which the regulations apply.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Royal Medical Society of Edinburgh.

THE inaugural address of the 188th session of the Royal Medical Society of Edinburgh was delivered on Oct. 17th by Sir Ronald Ross, K.C.B., director and chief of the Ross Institute and Hospital for Tropical Diseases, London. Dr. A. B. Williamson, the President of the Society, was in the chair. Sir Ronald Ross took as the title for his address Thoughts on Medical Discovery. He said that a brief study of civilisation showed discovery to be a rare phenomenon, tending to be localised both in place and time. The Græco-Roman period of discovery lasted about nine centuries, and following it there came a long negative period of about 11 or 12 centuries in the course of which practically no advances of any kind were made. In the fourteenth and fifteenth centuries came the renaissance simultaneously in almost every line, in art, literature, science, exploration, and philosophy, a renaissance which had lasted up to the present day. Sir Flinders Petrie's hypothesis as to the cause of these periodic augmentations of intellectual vigour was that they followed the admixture of races by permeation or conquest. The vigour of a people began to increase some centuries after permeation with a foreign race; art and science were born or re-born, and then came regression and decay, followed by subsequent invasions and conquests. It was, indeed, unlikely, said the speaker, that all the world's nations could be at the same stage of development. India and China to-day were in the slack stage as compared with Europe, and Europe was approaching the slack stage as compared with America. Sir Ronald Ross held that medical discovery was to human beings the most important of all kinds of discovery. Yet, to judge by the public attention given to it, it was the least important. Men handed it over to the doctors and were good enough to allocate almost no money for the prosecution of it. The total amount provided for research every year in this country was, he said, probably only £180,000, a sum which represented a contribution of a penny per head for England, Scotland, and Wales, and this was for a science concerned with the life and health of all the people. For this penny everyone hoped to have his life prolonged. Life had been prolonged in the last 80 years in London from an average of 40 years to 60 years, and he did not see why the average expectation of life should not reach the 70 years of the psalmist. It was not known why elephants and parrots and tortoises lived for more than a century, while horses and dogs died before 20, and he said he had often wondered what would be the length of life of an individual kept entirely free from pathogenic organisms and certain deleterious foods and drinks. Doctors and every man of science might congratulate themselves that almost the whole of medical discovery had been made without the help of anyone and at their own expense, but the world would be wise to spend much more money than it was now doing in order to fight diseases of all kinds by investigating how they might be fought. The country had to pay millions of pounds for the prevention of foot-and-mouth disease, largely because it refused to pay small sums for the investigation of the disease. Sir Byrom Bramwell moved a vote of thanks to the lecturer, which was seconded by Dr. W. McKie.

University of Edinburgh.

At a recent meeting of the University Court of Edinburgh University it was announced that an ordinance had been approved by His Majesty in Council whereby medical students who have passed an approved examination in any of the subjects of the first or second professional examination at any other university in the United Kingdom or elsewhere, may have such passes counted as equivalent to passes

in Edinburgh University, subject to the approval of the Senate and the Court.

At the same meeting a letter was read from Miss Margaret C. Tod, M.B., Ch.B., who graduated with first-class honours in July, 1924, intimating that she did not feel justified in accepting the considerable sum of money granted to her in scholarships and prizes and requesting that the amount be added to the D. R. Wardlaw Memorial Fund for necessitous students. The Court resolved to accept Dr. Tod's offer.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Free State: The Local Government Bill.

THE Minister of Local Government and Public Health has found that so many amendments to his Local Government Bill would be necessary that he has decided to withdraw the Bill introduced last session and bring in an entirely fresh measure. In reference to this the Minister, Mr. Burke, with some of his principal officers, gave an interview last week to a deputation from the Irish Medical Committee. The members of the deputation were Drs. J. M. Day, H. Raverty, P. J. Shanly, and T. Hennessy, with Mr. C. H. Gick. Sir James Craig also attended and took part in the discussion. The following is a brief summary of how medical officers will probably be affected if the Local Government Bill becomes law:—

1. Section 8 of the Local Government Act, 1919, with its mandatory provisions for pensions, will be allowed to stand for all existing medical officers who within a prescribed time, which may be three or six months, elect to come under this section for the purposes of their pensions. It is believed, however, that the basis for calculating the amount of pensions will be so altered as to secure a more uniform standard.

2. Added years for meritorious and professional service will remain optional, with the right of appeal to the Minister.

3. Pensions of medical officers appointed after the passing of the Local Government Bill will be as heretofore permissive, but in case of refusal by a local authority, or dispute as to the amount, the right of appeal to the Minister will be provided for. It was pointed out on behalf of the Ministry that there is no mandatory provision for pensions for civil servants, and that the appeal to the Minister will place medical and other officers of local authorities on the same footing as civil servants with regard to pension rights.

In addition to the pension sections other matters arising out of the Bill were discussed, and the Minister promised to give them his consideration.

Royal Victoria Hospital, Belfast.

The session was opened on Oct. 16th, when there was a large attendance of students and of the medical staff. The opening address was delivered by Prof. W. W. D. Thomson, who paid a tribute to those friends of the hospital who had passed away during the previous year—Viscount Pirrie, Sir John Walton Browne, and Miss Riddell. He surveyed the field of clinical medicine, emphasising the fundamental importance of bedside observation, and concluded with an interesting analysis of the careers of those students who had begun their medical studies with him 20 years ago. A hearty vote of thanks was passed to the lecturer for his valuable and instructive address on the motion of Prof. J. A. Lindsay, seconded by Colonel T. Sinclair.

Dr. William Calwell and Dr. H. L. W. Kisack have retired from the active staff under the age-limit and have been appointed consulting physicians to the hospital. The board of management passed a very cordial vote of thanks to them for long and faithful services. They have been the recipients of a presentation of silver plate from their colleagues on the staff, by whom they were entertained at dinner. Their successors on the active staff are Prof. W. Thomson and Dr. Foster Coates. To fill the vacancies thus created in the out-patient department Dr. Robert Marshall and Dr. Samuel I. Turkington have been appointed assistant physicians.

The entrances at the Belfast Medical School this session show some decline on the previous session's figures, but are considerably in excess of the pre-war figures.

The Health of Belfast: Annual Report for 1923.

The most notable feature of the recent health history of Belfast has been the rapid decline in typhoid fever. Thirty or forty years ago the disease was very rife, and in one year the deaths numbered no less than 500. In the year 1904 the deaths were at the rate of 0·30 per 1000 of the population. In 1908 the figure had fallen to 0·15 per 1000. In 1909 there was a drop to 0·05 per 1000, and in the period 1919–22 the figure was 0·04 per 1000. In 1923 the figure had fallen to 0·01 per 1000. This rapid and satisfactory decline was coincident with the inauguration of the present excellent water-supply, which is chiefly derived from the large storage basins in the Mourne Mountains. Diphtheria seems to be about stationary. The notifications for 1923 were 289, but of these 48 were found not to be suffering from the disease. The average number notified for the decennial period 1913–22 was 289, and deaths in 1923 numbered 24, as compared with an average for 1913–22 of 34. Scarlet fever continues to be very prevalent. The number of cases during the past year was 981, as compared with 744 in 1922, and an average for 1913–22 of 1440. Of the 20 cases of encephalitis lethargica notified in the report for 1923, three were fatal. The deaths from cancer numbered 391, as compared with 363 in 1922. Influenza accounted for 100 deaths, as compared with 241 in 1922. The deaths from phthisis were 571, as compared with 624 in 1922. Pneumonia accounted for 564 deaths, as compared with 594 in 1922. The report contains full particulars of the sanitary improvements effected during the year. Progress is well maintained.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Thirty-third French Surgical Congress.

THE thirty-third French Surgical Congress which was recently held in Paris was eminently successful both from the point of view of attendance of members and from the character of the discussions which were held. The President, Prof. Tuffier, opened the Congress with a paper on the modern conception of surgery. He said that surgery was based on a firm tripod of technique, observation, and experiment, and the keynote of development was precision. Dr. Auvray, who took on the office of general secretary, paid a tribute to his predecessor, Dr. J.-L. Faure, and in the name of the Congress welcomed a delegation of 30 Polish doctors, headed by Dr. Zawadski, of Warsaw. Three main subjects came up for discussion during the Congress. The first was the treatment of simple fractures of the upper extremity of the femur and their ultimate results. Mr. Dujarier, of Paris, and Mr. Léon Imbert, of Marseilles, read a well-informed paper on the different methods of treatment of fractures of the neck of the femur. They discussed operative treatment and non-operative treatment. Of the latter the following methods were described: (1) Championnière's method—namely, a very short stay in bed with extension and massage from the commencement; (2) continued traction; and (3) Whitman's method—namely, accurate reduction followed by retention in plaster-of-Paris. The second subject for discussion was the indication for surgical treatment in uterine fibroids. Mr. Tixier, of Lyons, set forth the conditions in which surgical treatment was the only possibility. The mortality from operation was about 4½ per cent. (576 deaths in 12,893 cases), of which 2 per cent. were due to infectious complications. Other causes which too frequently caused death were the sequelæ of anæs-

thesia and vascular complications, such as phlebitis, hence it was necessary to improve both technique and pre- and post-operative treatment. Surgery should be conservative as often as possible. The ideal should be myomectomy, thus preserving the form and function of the uterus, a thing to be aimed at even in the case of elderly primiparæ, as the natural ovarian secretion was insufficient to cope with the disorders of a precipitated menopause. Where the intervention was not conservative it must be radical, and the procedure of choice was total hysterectomy. In very young women, in order to leave the anatomical form of the vagina intact, subtotal hysterectomy might be performed. Mr. Labey, of Paris, then spoke of the different forms of operation, both in the pregnant and the non-pregnant woman.

The third subject for discussion was pre- and post-operative care and the choice of an anæsthetic in gastro-intestinal surgery, on which Mr. Lambret, of Lille, and Mr. Lardennois, of Paris, had prepared a paper. One meeting of the Congress was given over to kinematographic demonstrations, showing the technique of removing the cancerous breast by Mr. Depage and Mr. Davis, of Brussels, laminectomy by means of a new nibbling forceps by Mr. Davis, two methods of cosmetic surgery of the breast by Mr. Dartigues, of Paris, and the technique of operations for correcting defects of the nose by Mr. Dufourmentel, of Paris.

The Fourth Pediatric Congress.

The Fourth Congress of the Association of French-speaking Pediatrists was recently held in Paris at the Sick Children's Hospital under the presidency of Prof. Marfan, assisted by Dr. Henri Barbier, the general secretary. There were three subjects of discussion, the first being the treatment of purulent pleurisy in children, on which Dr. Ribadeau-Dumas, of Paris, and Dr. Rocher, of Bordeaux, had prepared a report. In the child the effusion was purulent in one-half or one-third of all cases, while in the adult it was only seen in about every fifteenth case. The different treatments employed for this condition were reviewed by the speakers. The variety in the methods of treatment adopted was to be explained by (1) the many different types of purulent pleurisy; (2) the state of the patient; (3) the state of the lung; (4) the age of the subject; and (5) by the type of the organismal infection. The evacuation of pus must be promoted by all medical resources available, such as chemotherapy, serotherapy, and vaccinotherapy. Extensive drainage by resection of the ribs ought to be avoided. Purulent pleurisy in very young children required conservative measures, such as aspiration and syphon drainage. The low infectivity of pneumococcal infections was well known. For these infections the treatment indicated was repeated aspiration, which might be followed by some therapeutic injection. In tuberculous effusions conservative treatment was indicated, and in other cases pleurotomy. The second subject for consideration was the prophylaxis and treatment of infantile syphilis. Mr. Léon Tixier read a paper in which he discussed hereditary syphilis in all its aspects, and dealt with the question of authorising marriage between syphilitic individuals and of the treatment to be adopted during pregnancy. He advocated the supervision of parents and children with a view to avoiding the consequences of hereditary syphilis. For the suckling he advised a combination of mercury, arsenic, and bismuth, administered alternately. When the child was weaned the treatment differed little from that of the adult. The exhibition of small initial doses avoided fatal accidents, especially if care was taken not to give intravenous injections to cachectic children. The ease with which mercurial inunctions could be carried out was not a sufficient reason for preferring them to more efficacious measures when such could be applied. The third subject comprised the study of the ætiology and pathogenesis of rickets. MM. Lesné, de Gennes, and Vagliano, of Paris, referred to the results obtained from animal experiment, and stated their conclusions from the study of human rickets. Human rickets appeared to have a very different source of origin from that of experimental rickets. For example, deficiency of phosphorus and calcium was not found to be a basic factor, while syphilis and tuberculosis seemed to be a relatively rare element in ætiology. On the other hand, much greater attention must be paid to digestive troubles of early childhood as a causal factor. In spite of the obscurity which still existed in regard to the ætiology and pathogenesis of rickets great benefit was gained by treatment with solar radiation, ultra-violet rays, and cod-liver oil. These three measures formed the most effective therapeusis both from the curative and the preventive aspects.

The Congress of French-speaking pediatrists will be held in future every second year, alternately in Paris and outside France. The next is fixed for Lausanne in September, 1926.

Annual Statistics of Recently Qualified Doctors.

The number of diplomas of doctor of medicine issued by the French Medical Faculty during the academic year 1923–24 was 1124, an increase of 130 on the number issued in the preceding year. The figures vary greatly in the different schools. Paris leads with 496, then come Lyons (152), Bordeaux (133), Montpellier (103), Toulouse (53), Lille (45), Algiers (43), Strasbourg (42), Nancy (29), and the French Medical Faculty of Beyrouth, Syria (28). These figures refer only to the State diploma—that is, the diploma which gives the right to practise medicine in France. The University diploma, which is reserved for foreigners, is a purely academic one, and does not confer any of the rights and privileges attached to the status of doctor as given by a State diploma. The number of these diplomas granted by French universities during the academic year 1923–24 was 165.

UNITED STATES OF AMERICA.

(FROM AN OCCASIONAL CORRESPONDENT.)

The Use of Insulin.

IT is somewhat disappointing to find that the discovery of insulin has not yet checked the increasing death-rate from diabetes in this country. On the contrary, diabetes achieved last year, for the first time in the statistical history of New York City, the distinction of a place among the first causes of death. The Metropolitan Life Insurance Company, naturally interested in this apparent failure, has investigated the histories behind 500 certificates giving diabetes as the cause of death. They made the surprising discovery that only 45·4 per cent. of these had received any insulin at all. Of the minority receiving insulin, one-third took their first dose in the last week of life, and nearly two-thirds within a month of death. Of the complications certified coma was the most common (46 per cent.). Arteriosclerosis was reported in 24·8 per cent., chronic nephritis in 23·4 per cent., and gangrene in 23·4 per cent. In a series of 58 cases where no other complication than coma was present 21 received not a single dose of insulin.

Mortality-rates in 1924.

The 15,000,000 policy-holders of the Metropolitan Life Insurance Company provide a convenient albeit a selected group of the nation from which the trend of death-rates may be rapidly determined. Among this selected group the death-rate from diabetes in the first six months of 1924 shows a decrease of 21·6 per cent. among white policy-holders and more than 10 per cent. among coloured policy-holders, as compared with the four years preceding. The death-rate from automobile accidents was one of the few which showed increase—to 12·6 per 100,000 for whites and 11·7 for coloured. The coloured rate is a 92 per

cent. increase over that for the corresponding period in 1922. Satisfactory declines are shown in the rates for diphtheria and typhoid fever. There is also a definite fall in the cancer rate for white policy-holders (72·3 to 68·7). The gain is nearly offset by a rise in the coloured rate. This situation is one that might be expected to arise if the educational programme is resulting in earlier diagnosis among the more intelligent people.

Anthrax in New York.

A clinical and epidemiological study of anthrax in the City of New York has recently been made by Dr. William Jacobsohn for the five-year period 1919–1923. He visited each one of the 61 reported cases. The infection in 32 of these was derived from shaving-brushes. One-third of all the cases occurred among brush-makers, warehousemen, truckmen, and long-shoremen. The use of anti-anthrax serum alone gave as good results as any other method of treatment. Of 36 cases that received this treatment 29 recovered, although the fatality-rate for the 61 cases was 31 per cent. The causes contributory to fatality are classified as (1) virulence of infection, (2) extreme age or poor physique of patient, (3) delay in seeking medical attention, and (4) erroneous or late diagnosis and late treatment. The incubation period (from exposure to local swelling following the appearance of a papule) is given as follows: In 31 cases, one day; in six cases, two days; in four cases, three days; in five cases, four days; in five cases, five days; in one case each, six days, seven days, and eight days, respectively; and in seven cases undetermined. Sixty per cent. of the cases experienced no pain. In only 18 cases did the temperature rise above 102° F. As a consequence of active measures by the department of health, the incidence of anthrax in New York is declining rapidly. Only one case has been reported in the first six months of this year.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Fewer School-children in Vienna.

WHEN the secondary schools opened for the winter term in the middle of September the total number of new pupils showed a diminution on the figure for the previous year. Education is compulsory between the ages of 6 and 14 years, and not more than 11,000 children aged 6 years were enrolled, in comparison to last year's figure of 12,680. Consequently a number of schools had to be closed down. This falling-off in the numbers of school-children is one of the visible results of the decreasing birth-rate which has been recorded since the beginning of the century, and which was aggravated by the ten years of war and its consequences. The calculations based on the statistical data published by the Municipal Board of Health show that this year will probably be the last one in which a decrease will be manifest; the next school year will most probably give indication of a slight increase. But as the increase forecasted to the year 1928 is more than counter-balanced by the loss of numbers due to older pupils leaving the schools, the total number of children in school (which in 1923 was 146,200 boys and girls) will diminish to 119,000 in 1928. As a result of the constant falling-off of pupils there has been a very favourable decrease in the average number of children occupying one class-room. The average number is now 29–30 as compared to 50–70 in former years. This is an advantage from the sanitary and the social points of view. In classes for mentally affected children the number has been reduced to 12–18 pupils.

The Winter Session of the Vienna University.

The University of Vienna opened its gates to students in October, and the session closes in March, 1925. Whilst the number of medical students during the summer term was 2048, or about 30 per cent. of the total matriculated students at the University, 2342 have been enrolled for the winter session. This is the first year that the regular courses in all branches will be held just as before the war. A large number of classes will be given in the English language, as the American Medical Association of Vienna has arranged with the leading professors and assistants of the clinics and hospitals to hold special classes for their members. The fees vary between 4*s.* and 8*s.* per hour per student, not more than 10 being admitted to any one class; all English-speaking doctors may attend these classes. Apart from the regular clinical lectures on surgery, materia medica, dermatology, gynæcology, pediatrics, and ophthalmology, there has been arranged a variety of special lectures on such subjects as chemistry of the blood, diabetes, tuberculosis, social medicine, occupational diseases, psycho-analysis, and bacteriological and serological problems. One subject only will be more limited in its scope than in previous years—namely, anatomical dissections. Owing to the scarcity of cadavera (on which I reported some time ago), Prof. Tandler will not take up his regular anatomical lectures this year.

The Medical Profession and the Problem of Artificial Abortion.

The aspect of eugenics which aims at preventing undesirable births is now a leading issue in Austria. All classes of the population have come to understand that there are moral, social, medical, and even financial indications for the premature interruption of a pregnancy. The law, however, still sets its face sternly against this practice, and its action in certain cases in the last few months (vide THE LANCET, 1924, i., 1285) raised a violent protest from the medical profession and furthered the attempt to alter the existing law by amendments to a Bill before the National Assembly. The profession as a whole has openly taken up the fight against what I consider to be antiquated laws, and hardly a week passes in which the subject is not dealt with at mass meetings or in articles in the press or in petitions to the National Assembly and Ministry of Justice. No doctor now complies with the order of the Public Prosecutor, which demands that every case of abortion be notified to the police, nor do the hospitals, as a rule, make a diagnosis of abortion except where fatal results are expected.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg. Comdr. W. N. Blatchford is placed on the Ret. List.

ROYAL ARMY MEDICAL CORPS.

Maj. F. A. H. Clarke to be Lt.-Col., vice Lt.-Col. J. H. R. Bond, to ret. pay.

Maj. T. C. R. Archer is secd. for serv. under the Colonial Office.

Capt. W. H. Ferguson is granted the temp. rank of Maj. whilst empld. as Dep. Asst. Dir. of Pathology.

Capt. F. J. Hallinan relinquishes the actg. rank of Maj. on ceasing to be empld. as Dep. Asst. Dir. of Pathology.

Capt. H. W. L. Allott retires, receiving a gratuity.

TERRITORIAL ARMY.

Maj. V. T. Carruthers to be Lt.-Col. and to command the 137th (North Midland) Field Ambulance.

Maj. (Prov.) G. B. Brand resigns his commn. and retains the rank of Capt.

Lt. W. J. C. Watt to be Capt.

ROYAL AIR FORCE.

A. Harvey and H. W. D. Mackenzie (for duty at Royal Infirmary, Edinburgh) are granted short service commissions as Flying Officers.

INDIAN MEDICAL SERVICE.

Lt. A. L. Watts to be Capt.

Capts. Pappu Subbaramayya, A. Williams (and is permitted to retain the rank of Capt.), and Lt. Manohar Datta Gautama relinquish their tempy. commns.

The King has approved the retirement of Maj.-Gen. J. Jackson.

Gurbaksh Singh Chawla to be tempy. Lt.

GENERAL MEDICAL COUNCIL:

ELECTION OF DIRECT REPRESENTATIVES.

ENGLAND AND WALES.

FOUR names were selected last July by English and Welsh deputies at the annual meeting of the British Medical Association for nomination on behalf of the Association as Direct Representatives of the registered medical practitioners of England and Wales on the General Medical Council. These were Dr. R. A. BOLAM, Dr. J. A. MACDONALD, Sir JENNER VERRALL, and Dr. H. B. BRACKENBURY. On their behalf the following election address has been circulated.

LADIES AND GENTLEMEN,

The election of four Direct Representatives for England and Wales to the General Medical Council will take place early in November.

In the deliberations of the Council and in the exercise of its statutory powers there is constant need for a knowledge, so far as it can be ascertained, of the collective view of the profession.

We appeal as a group to you, the electors, in the belief that our conjoined experience and opportunities are of such nature as to enable us to offer you service which would be of value in this respect. Individually and as a group we have had in different capacities a considerable experience of varying professional duties and responsibilities, and we confidently claim an intimate knowledge of public medical work. Two of us (Dr. Macdonald and Sir Jenner Verrall) have been familiar with the work of the General Medical Council for a number of years and have the privilege at present of acting on some of the Committees of the Council whose activities have a very direct and practical bearing on the interests of the profession. Dr. Bolam has been one of your Representatives for the years 1919 to 1924. The record of public service and the very special knowledge of certain aspects of medical work possessed by Dr. Brackenbury are well known to the profession and will, we believe, commend his candidature to you.

One of the chief pre-occupations of the General Medical Council is with medical education, and it is important that matters relating thereto which bear upon the ultimate efficiency and interests of the practitioner should be adequately voiced by Representatives in direct touch with medical practice in its several branches.

The Council is now constantly consulted by the Government Department in Bills affecting the profession and in regulations proposed under Acts of Parliament.

Possible developments and extensions of a National Health Insurance Service are the subject of investigation by a Royal Commission now beginning its deliberations, and the effect of its findings on the whole life and outlook of the profession may be far-reaching.

The introduction of National Health Insurance has raised new ethical and disciplinary questions which have required the attention of the Council. Further developments may be expected to create fresh problems of a like nature on which your Representatives should be able to express practical and well-informed opinions.

We believe that there is more than ever a need for Direct Representatives on the General Medical Council who are experienced in administration and in the medico-political difficulties of the profession. We offer the assurance of a sincere desire to spare no effort in our power for the credit and welfare of the profession, should you honour us by electing us as your Representatives; and we ask not only for your vote but for your active assistance in securing the votes of your colleagues to this end.

R. A. BOLAM,
Representative Member, General Medical Council; Member, Voluntary Hospitals Commission; Member, Consultative Council of Ministry of Health on Medical and Allied Services; Chairman of Council, British Medical Association.

H. B. BRACKENBURY,
Chairman of Representative Body and of the Insurance Acts Committee of the British Medical Association; Vice-President, formerly President of the Association of Education Committees.

J. A. MACDONALD,
Representative Member, General Medical Council; Member Consultative Council of the Ministry of Health on Medical and Allied Services; formerly Chairman of Representative Meetings and Chairman of Council, British Medical Association.

T. JENNER VERRALL,
Representative Member, General Medical Council; late Chairman, Central Medical War Committee for England and Wales; Member of Council and formerly Chairman of Representative Meetings British Medical Association.

Oct. 23rd.

Dr. F. H. WESTMACOTT, of Manchester, who is standing as an independent candidate, presents to the electors a summary of his professional record. Qualifications: B.Sc. Vict., M.R.C.S., L.R.C.P. 1890, F.R.C.S. by examination 1894. He studied at Manchester University and afterwards in Paris and Vienna for about 18 months to acquire methods of teaching and practice. Since 1898 he has held appointments on the hon. medical staff of several hospitals, particularly the Manchester Royal Infirmary, where he is hon. aurist and laryngologist. He is University lecturer as well as examiner in oto-laryngology. His election address continues: "As consulting surgeon and teacher I have acquired a wide experience of the requirements of medical students and of medical education as well as of the needs of the public. In conducting post-graduate courses of lectures the question of qualifying diplomas in special branches of medicine and surgery has been of great interest to me. I am an examiner for the State Registration of Nurses. An appointment on the hon. staff of the Victoria Dental Hospital of Manchester for many years provided an intimate knowledge of the education and practice of dentistry. During the whole of my professional career I have taken an active interest in the energies of many medical societies, both scientific and ethical. Among other appointments I am a member of the North-Western Advisory Council of the Ministry of Pensions. Such vital questions as the National Health Insurance Acts and the Workmen's Compensation Acts have long engaged my attention. An intimate knowledge of them has convinced me that considerable amendment and improvement are necessary to obtain the maximum benefit and satisfaction to the public and the medical profession. The requirements of the medical services of the Army have impressed me during the 26 years I have held a commission in the auxiliary and regular forces."

Dr. Westmacott served from August 5th, 1914, to Jan. 29th, 1920, spending nearly three years in France in command of a general hospital, and later as A.D.M.S. of the Marseilles Base. Before going to France he commanded the 2nd Western General Hospital in Manchester. Since the war he has held the position of A.D.M.S. of the 42nd (East Lancs) Division, holding the rank of Colonel A.M.S. (T.). He is a Commander of the Order of the British Empire, a Knight of Grace of the Order of St. John of Jerusalem, and a Deputy Lieutenant for the County Palatine of Lancaster.

Dr. JOHN BROWN, who stood in 1919 as an independent candidate, writes that while he is not standing this time he still wishes to protest against the nomination by the British Medical Association of four Representatives, on the ground that this practically excludes the free election by the medical profession of Representatives who are not members of the Association. He advocates the division of the English constituency into four for electoral purposes.

SCOTLAND.

On behalf of the candidature of Sir NORMAN WALKER we have received the following letter.

SIR,—The President of the General Medical Council has issued his notice for the election to the Council of a Direct Representative of the Registered Medical Practitioners of Scotland.

We have ascertained that Sir Norman Walker, the present Representative, is willing again to place his services at their disposal. Sir Norman has made for himself a position upon the Council upon which those who have supported him in his previous candidatures may look with some pride. He is Chairman of the Business and Examination Committees, and a member of the Executive and Penal Cases Committees, while his selection by the General Council as Commissioner to India to investigate the conditions of Medical Education there speaks well for the position he has acquired in the

esteem of the Council. We venture to express the opinion that our medical brethren in Scotland could not do better than support his candidature for another term of office.

We are, yours &c.,

C. E. DOUGLAS, Cupar.
J. B. SIMPSON, Golspie.
GEORGE WILLIAMSON,
ASHLEY W. MACKINTOSH,
JOHN MARNOCH,
J. F. CHRISTIE, Aberdeen.
D. ELLIOT DICKSON, Lochgelly.
J. MACDONALD, Cupar.
JOHN J. WILSON, Anstruther.
G. LOVELL GULLAND,
HAROLD J. STILES,
ROBERT THIN, Edinburgh.
T. K. MONRO,
W. HERBERT BROWN, Glasgow.
GEORGE R. LIVINGSTON, Dumfries.
MURRAY B. STEUART, Kirkcudbright.
J. P. BROWN, Campbeltown.
P. F. MACFARLAN, Stirling.
ROBERT STIRLING, Perth.
ROBERT INCH, Gorebridge.
C. J. W. DIXON, Hawick.
A. J. CAMPBELL, Duns.
WILLIAM MCALISTER, Kilmarnock.
P. T. HERRING,
DAVID WATERSTON, St. Andrews.
JAMES LAURIE, Greenock.

MENTAL HOSPITALS SERVICE.

A SATISFACTORY year's work and several changes of interest are recorded in the annual report of the *Dorset Mental Hospital* for 1923–24. The recovery-rate has been high, 39 per cent. on total admissions and 54 per cent. reckoned on total recoverable cases. Satisfaction is expressed with the results of the "open door" system adopted in certain wards; the patients are also better classified. 84 are allowed parole within or outside the grounds, and 17 patients away on trial have received money allowances. Remarkably few epileptics and general paralytics have been admitted; the comparative freedom from syphilis of rural areas is doubtless the explanation in the latter case, but the rarity of epilepsy in Dorset is less readily explicable and is deserving of investigation. There is now an out-patient centre in Dorchester, conducted by the medical superintendent, Dr. G. E. Peachell, where 52 patients have been seen during its first year of working; 10 of these recovered, 12 were relieved, and 9 were certified and admitted to the hospital. In addition to a resident medical staff of four members, the hospital possesses a visiting dentist and a visiting physician, and has recently acquired a laboratory assistant (apparently not medically qualified), who has undertaken a large and varied amount of pathological work, including water analyses, serological and bacteriological work in connexion with typhoid and dysentery, and the preparation of vaccines. Among the causes of death appears one case of rupture of a coronary artery, surely worthy of note as an extremely rare occurrence.

The annual report of the *Brighton County Borough Mental Hospital, Haywards Heath*, for 1923 contains little but a bare record of changes among the patients, staff, and committee, apart from the observations made by a Visiting Commissioner, from which alone can any idea be obtained of the conditions under which the patients are living. His report embodies certain criticisms, some of which owe their origin to the fact that the fabric dates from 1859; the facilities, the lack of which is most severely felt, are a laboratory, clinical room, operating theatre, verandahs, baths, and an out-patient centre. It is also suggested that male patients should be shaved, that parole (with money allowance) should be granted more often, and that clothing and diet should be improved in certain respects. It appears that the ordinary patients' milk is skimmed to provide butter for debilitated cases; meanwhile, the nursing and domestic staff are supplied with margarine, but since they prefer to buy their own butter, their discarded margarine is melted down with dripping for the patients. This strange and complex proceeding would be humorous but for the fact that there are 21 known cases of active tuberculosis in the hospital. Our resources in the treatment of mental disease are few enough, but we should surely use, at least in recoverable cases, those of which we have knowledge, and among them an adequate dietary takes an important place.

Correspondence.

"Audi alteram partem."

CANCER AND SOME OF ITS SIGNIFICANT CHEMICAL REACTIONS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 4th Mr. H. Gordon Reeves set out the salient features of the chemical work done on the cancer problem in the physiological laboratory of King's College, London. There is a distinct parallelism between the work outlined and that initiated by Sir George T. Beatson in 1910 at the Glasgow Royal Cancer Hospital, and it is interesting to note that the work done in Glasgow during the last 10 or 15 years has received a large measure of confirmation from that of Shaw-Mackenzie and Reeves.

In Reeves's communication some points of an unsettled nature are brought forward, and I should like to draw attention to these. In the first instance Shaw-Mackenzie is quoted as stating that tissue lipolysis and utilisation of fats are defective in cancer. In his opinion normal blood serum has an accelerating influence on lipoclastic activity, and this activity is diminished by the addition to lipase of serum from a cancerous subject. From this and other findings he concludes that there is a general deficiency in lipolytic control, which deficiency, we presume, he considers is manifested in the carcinomatous locality. If this be so, then one would expect to find a lowered, rather than an increased, saturation in the fat of the adipose tissue affected. Instead Shaw-Mackenzie and Reeves have found, as we have in this research department, that there is an increase in unsaturation of the adipose tissue invaded by carcinoma. I do not think that the range of variation in lipolytic activity affects to any marked degree change in saturation. If anything, an increased activity in the tissues would increase the amount of free fatty acid. In a determination of iodine value this free fatty acid would be part of the lipin complex to be evaluated and its associates of glycerol or lecithin structural units would be absent from the ether extract. Thus to the complex there would be added a substance or substances with comparatively small molecules and a proportionately high unsaturation coefficient. As a result of such an addition due to increased lipolytic activity, the iodine value of the complex would manifestly be increased. It is on that teleological basis that we are inclined to question the validity of Shaw-Mackenzie's observation.

Recent research has shown that to simulate as closely as possible "in vivo" conditions the course of enzyme reactions must be controlled with due attention to the hydrogen-ion concentration. It is obvious, of course, that, in the test-tube, lipase activity is manifested by a change of pH towards the acid side, owing to an accumulation of the products of lipolysis. In the body, however, there is a delicately adjusted mechanism whereby the products of enzyme action are removed from the sphere of activity as soon as formed, and, because of this control, a constant level of hydrogen-ion concentration is maintained and enzymic inhibition is frustrated. It will be seen, then, that it is difficult to simulate the biotic courses

of lipase activity in the test-tube and the interpretation of results becomes endowed with a misleading elasticity.

In the second place, Reeves's communication refers to the importance of such lipins as lecithin and cholesterol. It is fairly well established that there is an excess of lecithin in the cancer cell and that there is also a high cholesterol concentration. Reeves states that the increased iodine value observed in the fat of tumours is probably due in no small part to increased cholesterol content. I do not think that cholesterol would have any marked influence in the direction of unsaturation change. For example, if dioleopalmitin with a molecular weight of 858 and an iodine value of 59·2 have added to it a gram-molecular equivalent of cholesterol the rise in iodine value is 2·0. If, instead, lecithin be added in the same proportion, there is a rise of 1·9 units; if triolein be added, there is a rise of 13·7 units; if oleic acid be added, there is a rise of 7·6 units. In these computations lecithin, for the purpose of the argument, is taken to be dioleolecithin, although, like kephalin, it is generally assumed to have both a saturated and an unsaturated fatty acid in its molecule. If to a gram-molecular equivalent of triolein with a molecular weight of 884 and an iodine value of 86·2 a gram-molecular equivalent of dioleolecithin with an iodine value of 63·2 be added, then there is a depression of 11 units in iodine value. Under similar conditions, with cholesterol, the depression is 6·2. From these figures it will be seen that cholesterol and lecithin exert very little influence on saturation change, even though they have been associated in my calculation with neutral fat in such large proportions. Thus, in the case cited by Reeves, where Wacker has found a 66 per cent. increase in cholesterol, the increase in iodine value of an aliquot portion of the fat from this tissue would be in the neighbourhood of 1·3.

Dioleopalmitin and dioleostearin each give iodine values closely approximating to that of the fat of normal adipose tissue. In cancer, however, the minimum values of invaded fat is in the neighbourhood of 65. If, as the result of certain pathological processes, there is an increased accession to the fat of such lipins as cholesterol and lecithin, there is practically no change in the iodine value of the fat provided the original value is near the cholesterol and lecithin values—65·8 and 63·2. If, however, the original iodine value of the cancerous fat is in the neighbourhood of 70 (the common figure found in our research work) then a marked increase of these two accessory lipins would produce a depression rather than a rise in the iodine unitage. This is demonstrable by a single hypothetical example. If triolein and lecithin are mixed in gram-molecular equivalents, there is a depression in the iodine value of triolein of 11 units. It would seem then that the threshold iodine value of fat change—i.e., the level at which it is liable to change in saturation from the addition of lecithin and cholesterol—is well under 65, and approximates to the level of the normal. The rôle of these lipins in influencing saturation change in cancer is, therefore, negligible, although it is conceivable that lecithin more than cholesterol, in virtue of its potentiality of lecitholytic change with the production of free oleic acid, might influence saturation change. Oleic acid added to dioleopalmitin (gram-molecular equivalents) produces a rise in iodine value of 7·6 units. It is quite obvious that in the tissues the amount of free oleic acid would not be so high as this relative to the amount of neutral fat, and it seems feasible to postulate that the major factor concerned in giving the high unsaturation index so characteristic of the fats in cancer is an oxidase mechanism whose main sphere of operation is confined to the fatty acid constituent of the fat or lipin molecule.

Reeves finds a distinct hypercholesterolemia associated with malignant disease. Work on the cholesterol content of the blood has been carried out at the Glasgow Cancer Hospital for over a period of a year, and a paper embodying the findings will shortly be published in the *British Journal of Experimental Pathology*. In the main, the results found indicated a slight hypocholesterolemia, although in view of the conflicting literature on the cholesterol of the blood it is difficult to establish a condition either of hyper- of hypo-cholesterolemia. In the literature consulted, four or five different "normal" cholesterol values ranging from 0·09 per cent. to 0·25 per cent. are given for the cholesterol concentration in serum. In the paper referred to above, there is a description of a uniform technique for the estimation of this substance. Seventy cases were evaluated and it was found that a seasonal rhythm existed in cholesterol concentration, so that the "normal" figures already referred to were included in the range. This concentration rhythm extended to normal cases, and a comparison of these with malignant cases gave an indication of a slight decrease in the percentage content of cholesterol.

One would naturally expect a hypercholesterolemia, since autolytic change in tumour areas is bound to flood the tumour tissue with cholesterol which is an inert compound, easily thrown out of tissue-coördination, because of its insolubility and low reactivity, but it seems that the blood uptake of this substance is counterbalanced by its absorption by the tumour mass.

I am, Sir, yours faithfully,

ARCHIBALD N. CURRIE, M.A., B.Sc., A.I.C., F.C.S.,
Biochemist, Research Department, Glasgow Royal Cancer Hospital.

Oct. 22nd, 1924.

ERYTHEMA NODOSUM.

To the Editor of THE LANCET.

SIR,—I should be grateful if any practitioner among your readers who has met with cases of erythema nodosum in endemic or epidemic form, or has seen examples of the infectious nature of this disease, would communicate with me on the subject.

I am, Sir, yours faithfully,

G. F. WALKER, M.B., Ch.B.
General Infirmary, Leeds, Oct. 27th, 1924.

FACT AND THEORY IN RADIOTHERAPY.

To the Editor of THE LANCET.

SIR,—Prof. Russ is aggrieved because I said "One cannot 'lift' the results obtained by experiments on animals and apply them forthwith to the human subject." Now, to lift and apply forthwith means, if it means anything, to repeat, *without modification*, the procedures applied to the animal, and to expect, in man, precisely the same results as were obtained in the animal. I submit that we are not so closely related to cavies and conies, not to speak of representatives of the genus *mus*, that experimental results may be so applied to us. And I shall be much surprised if anyone actually engaged in the practice of medicine holds a different view. To say this is not in any way to deprecate the value of such experiments.

I am, Sir, yours faithfully,

F. HERNAMAN-JOHNSON.
Harley-street, W., Oct. 27th, 1924.

THE LATENT INTERVAL IN FUR DERMATITIS.

To the Editor of THE LANCET.

SIR,—All who have had special experience in dermatology will agree with the general conclusion stated in the last sentence of the excellent memorandum[1] issued recently by Dr. A. C. Parsons, in which he says, "Defective or careless technique or the use of potentially dangerous dyes is, therefore, in all probability the cause of the fur dermatitis in the circumstances under consideration." There is one elusive point, however, that deserves comment. The rash in its early stages is of a papulo-erythematous type, and results from the application of an external

[1] THE LANCET, Sept. 6th, p. 505.

irritant. In some cases it follows shortly after exposure, just as it would follow the application, say, of mustard or of cantharides. The report, however, states that in most patients there is a latent interval varying from two to six weeks or more. Why this assumption of latency over so long a period? One would not expect the effects of a mustard leaf to be delayed for six weeks "or more." On what principle is this assumption of delayed action to be explained in the case of the incriminated fur?

Various fallacies have already been indicated by Dr. Parsons. Since answering his official circular letter asking for information I have made a further observation that appears to point to an additional pitfall, as follows. For a long time I had been puzzled, as many others must have been puzzled, by the frequent answer made by patients, when told that their skin trouble was due to a fur, that it could not possibly be due to the fur, for it had been worn the previous winter, and had caused no rash. The fallacy of this dawned upon me one day when I noticed that the fur at the edge of the collar had been worn away and flattened down so that the patient's neck came into contact with the hide as apart from the actual hair; this altered condition probably explained both present susceptibility and former immunity. When we consider the structural difference between the fur and the underlying hide it becomes reasonably clear that the chemical irritant presumably concerned in most cases of fur dermatitis would be much more likely to be retained in the hide than in the hairs. Ergo, while a fur collar is new and the hair intact the neck of the wearer does not come into contact with the irritant accumulated in the hide, whereas when the hair is displaced or worn away the skin presses against the saturated hide, and dermatitis is the result.

This explanation avoids the assumption of a latency in these cases that is not in accordance with general dermatological experience.

I am, Sir, yours faithfully,

London, W., Oct. 27th, 1924. DAVID WALSH.

INTRA-OCULAR TENSION IN MYOPIA.

To the Editor of THE LANCET.

SIR,—I venture to state that few, if any, ophthalmic surgeons accept Dr. Edridge-Green's theory of the production of myopia. All the organs of the body vary in size in different individuals, and if we are to attribute the large or myopic eyeball to a pathological mechanism, then to what are we to attribute the more prevalent small, or hypermetropic, eyeball? It is accepted that myopia is commoner among schoolgirls than boys, and it was so long before gymnastics were introduced into schools. Sixty per cent. of myopic scholars are girls. Artificial myopia, or myopia due to spasm of accommodation, does "diminish or become emmetropic," but true static or ordinary myopia probably never disappears. The size of the eyeball is, in my opinion, determined by the factor of heredity. There are some exceptions to this finding. About 10 per cent. of myopes have corneal opacities, the result of keratitis. In this disease it is probable that toxins pass through the cornea and filter back along the coats of the eyeball, causing softening, and, later, stretching, at the sclero-corneal junction, or at the posterior segment of the eyeball.

I am, Sir, yours faithfully,

Cambuslang, Oct. 25th, 1924. J. A. WILSON.

AUTO-HÆMAGGLUTINATION IN PERNICIOUS ANÆMIA.

To the Editor of THE LANCET.

SIR,—I have read with great interest the article on this subject by Dr. H. Cohen and Dr. A. Roby Jones in your issue of Oct. 25th. Auto-agglutination of the red blood corpuscles is a phenomenon which occurs comparatively frequently in certain tropical fevers—notably trypanosomiasis. So frequently has it been observed in this disease, that at one time it was even suggested that the phenomenon of auto-agglutination in a thick drop was diagnostic of trypanosome infection. It is not invariably so; but it is highly suggestive. During the last three years I have had two cases of trypanosomiasis in which auto-agglutination occurred and prompted me to search a blood-film further for trypanosomes with ultimate success.

1. A patient consulted me in June, 1922, on his return from N. Rhodesia, where he had been treated for trypanosomiasis; marked auto-agglutination of his red blood corpuscles was observed, and prolonged search revealed *Trypanosoma rhodesiense* from which infection he died six months later.

2. A Government official from the Gambia consulted me in June, 1924, complaining of general weakness and malaise. Marked auto-agglutination of his red blood corpuscles was present, and further search revealed comparatively numerous *Trypanosoma gambiense*. Since that date he has been vigorously treated with "Bayer 205" and tryparsamide, with the result that he is now in normal and excellent health. When seen in October the auto-agglutination phenomenon was still observed, though there are now no signs of anæmia, and his blood count and hæmoglobin percentage are normal.

3. A very anæmic clerk from the Gold Coast consulted me on Oct. 14th; his spleen was enlarged. The diagnosis rested between subtertian malaria and trypanosomiasis. Marked auto-agglutination of his red blood corpuscles was present, while numerous subtertian malaria parasites were found. He has now almost entirely recovered, though the auto-agglutination phenomenon is still present.

It therefore appears that the phenomenon is of practical diagnostic importance in tropical fevers and, from the evidence in the second case I have cited, it does not necessarily appear to be associated with any ascertainable anæmia.

I am, Sir, yours faithfully,

London, W., Oct. 25th, 1924. PHILIP MANSON-BAHR.

DENTAL DRESSERS.

To the Editor of THE LANCET.

SIR,—Dr. Kerr states that "there are about 5000 names on the Dental Register of whom about 3000 are fully trained." If he will examine the Dentists Register for 1924 he will find that it contains the names of 13,473 dentists, of whom 6172 are fully qualified dental surgeons. The date of the report of Sir George Newman on which Dr. Kerr bases his imaginary "shortage of dentists" is the year 1920. Is it possible that Dr. Kerr is unaware of all that has happened in the dental world since then? I can assure Dr. Kerr, and I speak from intimate knowledge of the facts, that there is no shortage of fully qualified dentists for any necessary extension of the school dental service. The numbers applying for every such appointment give sufficient proof of that. When Dr. Kerr speaks of the work done by dental hygienists in America, is he aware of the difference between the work done by these persons and that at present done by dental dressers in Derbyshire?

I am, Sir, yours faithfully,

ROBERT LINDSAY,
Dental Secretary, British Dental Association.

Russell-square, London, W.C., Oct. 27th, 1924.

*** We note that the Dental Board on Oct. 7th received a communication from the Derby county medical officer of health in connexion with the sanction of the Minister of Health to the employment of three trained dental dressers on minor dental work under the personal supervision of a registered dentist for the treatment of children under school age. The Maternity and Child Welfare Committee of the county expressed itself as satisfied if the dentist was allowed to supervise the work of only one dental nurse working at the same time as himself, provided that the work which the dental nurses were allowed to do included (*a*) examinations with probe and mirror; (*b*) extractions and treatment of temporary teeth; and (*c*) treatment of the first permanent molars. The Board, however, resolved to adhere to the recommendations of the previous Board in regard to this matter.—ED. L.

Obituary.

WILLIAM HENRY B. AIKINS, M.D. TORONTO, L.R.C.P. LOND.

Dr. W. H. B. Aikins, consulting physician to the Toronto General Hospital and a well-known Canadian authority on cancer, died suddenly from angina pectoris while at his consulting rooms in Toronto on Oct. 3rd, in his sixty-sixth year. A son of the late Hon. J. C. Aikins, he was born in the Peel County and was educated at Upper Canada College. In 1881 he graduated in medicine from the University of Toronto, and in the same year came to England and obtained his L.R.C.P. Lond. After doing post-graduate work in New York, Edinburgh, and Vienna, he entered into practice at Toronto in 1884, where he acquired a large consulting connexion and became an outstanding figure in the Toronto medical world. A keen student of his profession and quick to take advantage of scientific advance in treatment, he was one of the first of his colleagues to use radium. He organised the American Radium Society, of which he was one of the first presidents. For many years he was physician to the General Hospital, Toronto, and was on the consulting staff at the time of his death. At one time he was consulting physician to the Toronto Hospital for Incurables and the King Edward Sanatorium, with which latter institution he was connected for some 10 years. Dr. Aikins was a prominent figure in many medical societies; he held the office of president of the Toronto Clinical Society and had a guiding hand in the Ontario Medical Association, the British Medical Association, and the Mississippi Valley Association. In 1907 he was elected as vice-president of the Canadian Medical Association, and for 15 years he acted as Senator of the Toronto University, representing the medical graduates. Dr. Aikins took a keen and active interest in international medical problems. In 1909 he was secretary for Canada at the International Medical Congress in Budapest, while in 1916 he held a similar office at the Lisbon Congress. He was a Fellow of the Canadian College of Physicians and a member of the Royal Canadian Institute in London. Well known as one of the proprietors and editors of *The Canadian Practitioner*, Dr. Aikins made many contributions to medical literature and was the author of the "Radium Treatment of Rodent Ulcer, Cancer, and Keloid" which was published in 1910. He was a prominent Freemason.

Dr. Aikins made many professional friends both in England and abroad, and his advice was keenly sought by—and freely given to—his young professional colleagues in all countries. He married in 1887 Augusta, daughter of the late Dr. Easton Hawkesworth, who survives him.

NATHANIEL THOMAS BREWIS, M.B., C.M., F.R.C.P. & S. EDIN.

WITH the death of Dr. N. T. Brewis at his house in Drumsheugh-gardens, Edinburgh, on Oct. 21st, in his sixty-ninth year, the Edinburgh Medical School loses a well-known gynæcological surgeon and a popular teacher.

Nathaniel Thomas Brewis was born at Eshott Hall, Northumberland, in 1856, was educated at the Edinburgh Institution and Edinburgh University, graduating M.B., Ch.M. in 1882, after which he held posts as house surgeon in the Royal Infirmary of Edinburgh and the Glasgow Maternity Hospital. In 1886 he became a Member of the Royal College of Physicians of Edinburgh, and was elected to the Fellowship in the following year; in 1899 he was elected a Fellow of the Royal College of Surgeons of Edinburgh. Early in his career he became interested in diseases of women and specialised in this branch. He confined his work entirely to gynæcology and developed a large private practice. The special features of his operative work were his careful technique, his striking dexterity, and the marked deliberateness with which every detail was performed. For a great number of years Dr. Brewis was associated with the gynæcological wards of the Royal Infirmary of Edinburgh, first as clinical assistant and assistant surgeon, and subsequently as gynæcologist in charge. He was lecturer and examiner to the University and the Royal College; he was ever a popular lecturer and will be remembered by his students both as a careful teacher and a sympathetic examiner. Formerly he held the post of gynæcologist to Leith Hospital, and to the time of his death occupied the post of gynæcologist to the New Town Dispensary. Everything was well arranged to the last detail at the nursing home in Cambridge-street, with which he was closely connected for a great number of years. He was the author of "Outlines of Gynæcological Diagnosis," and also contributed the article in the Encyclopædia Medica on "Displacements of the Uterus." The bulk of his writings, however, are to be found in the Transactions of the Obstetrical Society of Edinburgh of which he was at one time president. Among these are "A Series of Abdominal Sections," "Some Renal Cases," "Case of Pregnancy Complicated by Fibroid Tumours and Treated by Hysterectomy," and "Six Cases of Vaginal Cæsarean Section." He was a Fellow of the British Gynæcological Society, the Medico-Chirurgical Society of Edinburgh, and the Royal Medical Society of Edinburgh.

Brewis was keenly interested in Rugby football; in early days he played for his school, and later was one of the founders of the Edinburgh Institution Former Pupils Football Club. As a student at the University he represented Scotland on six occasions, in 1876 and 1878 against England, and in 1879 and 1880 against England and Ireland. He always maintained his interest in the game, and was at one time president of the Scottish Rugby Football Union.

During the last few years of his life, in fact from the time of his retirement from the Royal Infirmary, his health had not been good, and lately he had been able to do very little. He was twice married, and is survived by his widow, a son, and a daughter.

Medical News.

UNIVERSITY OF LONDON.—At a meeting of the Senate held on Oct. 22nd, the Vice-Chancellor (Prof. E. A. Gardner, Litt.D.) being in the chair, a University chair of anatomy tenable at the Middlesex Hospital Medical School was instituted as the result of a munificent gift of £20,000 by Mr. S. A. Courtauld. The title of the chair will be "The S. A. Courtauld Chair of Anatomy," and Dr. Thomas Yeates, at present University professor of anatomy at the School, was appointed as the first occupant.

UNIVERSITY OF GLASGOW.—At the graduation ceremonial on Oct. 20th the following degrees were conferred:—

M.D.—George A. Allan (with honours), Andrew Climie (with commendation), John A. Doctor, Alexander H. Hall, and William L. Templeton.

M.B., Ch.B.—With honours: Gavin M'Callum. With commendation: Edgar A. Underwood, John C. D. Mitchell, George G. Macphee, William Mackay, and John Hamilton.

James A. Adie, Archibald D. P. Alexander, John L. Allan, Ruth M. Allinson, Christina M. Anderson, James A. Barrie, Jessie L. Barrie, John B. Bennett, James Boyd, William Brackenridge, Francis H. Brisby, James B. P. Brown, James Buchanan, John A. Buchanan, Joseph Byers, Allison W. Cameron, Donald E. Cameron, David H. Campbell, Peter Campbell, Margaret E. Chalmers, James H. Chisholm, George Christie, James C. Clark, Ellen M. Clow, George A. Cormack, Annie T. Crookes, James T. Curran, William Cuthbertson, Joseph J. B. Dias, Robert Dick, Alfred T. B. Dickson, Enid M. Dixon, Alexander C. Douglas, Margaret C. Douglas, Robert Drummond, James M. Duff, Alexander Dunlop, Annie K. Easson, Ronald C. Fergus, John Ferguson, Joseph E. Fisher, James Flind, Margaret S. Ford, Robert D. Forrest, Thomas E. Gilchrist, William Glasgow, Mary S. Glen, Robert M. Gordon, George G. Graham, Thomas F. Greenhill, Grant R. Gribben, James Hamilton, John N. Hamilton, Isabella M. Harkness, Archibald C. Holms, Esther S. Hood, Jean F. Howie, Andrew B. H. Irvine, Helena J. S. Irving, William C. Jack, Elinor D. Jackson, John Johnston, John A. Ll. V. Jones, John Kyle, Robert L. Leask, Douglas M. Leroux, Beryl P. Lye, Mungo M. M'Clelland, Elizabeth L. M'Corquodale, Dhul A. M'Cowan, Robert M'Cracken, Thomas M'Culloch,

Robert K. M'Dougall, Hugh A. G. MacEwen, Malcolm MacEwen, Daniel M'Farlane, Josephine M. Macfarlane, John Macfie, William J. M'Intosh, Christian W. F. MacKay, Ian A. Mackay, John Mackay, William Mackay, Alexander R. M'Kelvie, William MacKenzie, Murdo Maclean, Neil M'Lean, Alexander J. Macleod, Coinneach B. Macleod, James M'Whirter, Elizabeth M. S. Meek, Gavin Millar, Hugh V. R. Miller, Patrick J. Molloy, James A. Montgomery, Edward J. Morgan, Robert R. Morrison, Christian D. F. Morton, Robert Morton, Walter D. Muir, William P. Muir, Margaret K. Murray, James Myles, Samuel M. Newman, Alexander Nicolson, Archibald Ogg, Tsoh-Chen Pan, William Parker, John Petrie, Alexander M. Pollock, Alexander D. M. Pyle, John Pyle, John A. C. Randall, Dorothy E. D. Rankin, Mary A. Rigby, Peter M. Ritchie, Edith M. Roberts, Graham M. Robertson, Harold C. Robertson, Helen I. Robertson, Andrew B. F. Rodger, Alfred R. Rooke, Alexander Ross, William Russell, Leslie G. Scoular, Peter M. Shepherd, Thomas R. Sinclair, Leo F. Skinnider, Isobel U. Sloan, Gilbert J. Smith, James K. S. Smith, Ian F. Somerville, Mary C. Stevenson, Mary S. Stevenson, Peter H. Stewart, John M. Stirling, Annie R. Stuart, Barbara S. Tulloch, George W. Vaughan, John G. Warnock, John Waters, Elizabeth M. Weir, Hamish M. Weir, John A. Wilson, and Frances D. Young.

Gavin M'Callum gains the Brunton Memorial Prize of £10 awarded to the most distinguished graduate in medicine of the year, and Elinor D. Jackson gains the West of Scotland R.A.M.C. Memorial Prize awarded to the candidate who obtained the highest aggregate marks in the Final Examinations held during the year 1924.

ROYAL SOCIETY OF MEDICINE: ANNUAL DINNER.—It has now been decided that private guests, including ladies, may be invited to the dinner on Nov. 26th, and that the tables are to be arranged so as to accommodate parties of friends and guests.

BRITISH MEDICAL ASSOCIATION: ANNUAL COUNCIL DINNER.—The third annual Council dinner of the British Medical Association was held in Edward VII. Rooms, Hotel Victoria, London, on Wednesday, Oct. 22nd, when Dr. R. A. Bolam, chairman of Council, presided. There was a large and distinguished attendance, including the Directors-General of the Naval and Army Medical Services, the President of the Royal College of Physicians, the newly elected President of the College of Physicians of Ireland, the Registrar-General, Sir Lister Scott, Lord Dawson of Penn, Sir Philip Magnus, Sir Henry Craik, and the Presidents of the various sister medical societies. The toast of "The Retiring Officers" was proposed by Dr. E. K. Le Fleming, who likened the retiring chairman of the Representative Body to the police officer on point duty at an important traffic centre borne down upon by omnibus resolutions and riders, but always able to direct the traffic safely and expeditiously. He spoke of the retiring President of the Association as one who had infected his colleagues with his genial personality, and who as host, city father, and friend of the poor, had greatly served his fellows. Mr. C. P. Childe, in replying, dwelt with pleasure on the fact that the holder of the office was necessarily one who held the confidence of his colleagues. Dr. Wallace Henry, in replying, recalled some of the important events in his three eventful years of chairmanship, when the constitution had been revised, a working agreement reached with the public health service, and affiliation completed with the Canadian Medical Association. The toast of "The Common Health" was proposed by Dr. H. B. Brackenbury, who recognised that it went far beyond the medical profession and its concerns. Were our towns well planned, every one given a proper house and smoke done away with, that would do more than the medical profession alone could do in many years. He hoped that more men and women would serve on public bodies and take their share in the common health. He objected to the distinction, now obsolete, between preventive and curative medicine. "Antenatal care and treatment is preventive midwifery; immediate post-natal care and treatment is preventive gynæcology." Education and health were but two aspects of the same thing. Sir George Newman, who responded, acknowledged the disinterested struggle of the Association to win and maintain the common health. He reminded the gathering of the tercentenary of Sydenham, who not only laid the foundation of medical practice but was himself practitioner and public servant in one. The National Insurance scheme he characterised as a concrete attempt to reduce the economic difficulties of the patient which prevented him from getting the full benefit of medical knowledge. The toast of "Our Guests" was proposed by Mr. N. Bishop Harman in a witty speech, to which response was made by Sir Arthur Robinson, First Secretary of the Ministry of Health, Sir StClair Thomson, President of the Royal Society of Medicine, and Dr. G. H. Simmons, late editor of the *Journal of the American Medical Association*. Dr. Simmons contrasted the problems of the American and British associations, and set out the enormous difficulties of distance with which the American Association had to cope. In spite of these it had grappled successfully with the great problem of medical education, in regard to which he gave some striking figures. Mr. H. S. Souttar proposed "The Chairman," who responded in a few well-chosen words. A pleasant programme of vocal and instrumental music filled up the gaps in a crowded evening.

ST. THOMAS'S HOSPITAL OLD STUDENTS' DINNER.—About 160 old students of St. Thomas's and their guests were present at the dinner in the Princes Restaurant, Piccadilly, on Oct. 24th, at which Dr. Seymour Taylor occupied the chair. In proposing the toast of St. Thomas's Hospital and Medical School the chairman made an amusing speech and referred to the day he had visualised in dreams when it would be possible to perform a surgical operation for mitral stenosis. The toast was responded to by the treasurer of the hospital, the Hon. Sir Arthur Stanley, and by the Dean of the Medical School, Sir Cuthbert Wallace. Sir Cuthbert Wallace spoke feelingly of the loss the hospital had sustained through the death of Prof. S. G. Shattock, for many years curator of the museum, which was now called the Shattock Museum, and of Sir Archibald Reid, former radiologist to the hospital. Dr. Henry Gervis, who had died recently, had obtained his first appointment to the old hospital in the borough. During the year the King had conferred honours on three St. Thomas's men. In speaking of the present athletic record of the Medical School, the Dean remarked that although the students had not carried off the palm on the football field, St. Thomas's Hospital nurses had beaten Guy's Hospital nurses in the final of the Inter-hospitals tennis tournament. "The Chairman" was then proposed by Sir Cuthbert Wallace, and he gave a graphic description of how Dr. Seymour Taylor had taught him anatomy. Dr. Seymour Taylor replied. The visitors were welcomed by Sir George H. Makins, and Sir John Bland-Sutton also spoke. Among the guests were Dr. C. R. Box, Sir Charles Scott Sherrington, Sir William B. Leishman, Surgeon Vice-Admiral J. Chambers, Sir Charles A. Ballance, Sir Richard Havelock Charles, Sir Hector Mackenzie, Sir Seymour J. Sharkey, Dr. H. G. Turney, Mr. Percy Sargent, Mr. G. A. Maling, V.C., and Dr. Ingleby Oddie.

CHELSEA CLINICAL SOCIETY: ANNUAL DINNER.—This society held its annual dinner at the Café Royal on Oct. 21st. Dr. Gordon Lane, the President of the society, occupied the chair, and nearly 100 members and guests were present. Amongst the latter were the Presidents of the Medical Society of London, the Royal Society of Medicine, and the Hunterian Society, the Dean of the Cancer Hospital, the Officer Commanding the Royal Military Hospital, Millbank, and representatives of *The Lancet* and the *British Medical Journal*. In proposing the toast, "The Progress and Prosperity of the Chelsea Clinical Society," Sir StClair Thomson expressed enthusiasm for the work accomplished not only by the central societies, such as the Medical Society of London, but of their very vigorous grandchildren of which the Chelsea Society is a notable example. Dr. Lane, in reply, referred to the rapid progress of the Chelsea Society, which, with a history of only 28 years, is to-day in a more flourishing position and has a larger membership than ever before. A special feature of this society is the manner in which it brings the local practitioner into close association with the consultants, both branches having equal representation upon all its committees. Judicious management and the careful selection of the programme for each session has led to great popularity, especially with medical men who have recently embarked upon general practice, and it is especially towards these that the society extends a welcome. The President announced that the forthcoming programme of the society includes, besides clinical evenings, discussions on the maladies common to the four great periods of life: infancy, adolescence, the climacteric, and senility. Dr. Eric Pritchard, Dr. A. P. Beddard, Sir Thomas Parkinson, and Dr. Leonard Williams are to be the principal speakers at these meetings. The health of the guests and the President was drunk with acclamation, and some delightful singing by the Westminster Singers added to the enjoyment of the evening.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—A comprehensive course in venereal disease will be held at the London Lock Hospital (Dean-street) from Nov. 3rd–29th. The course will consist of clinical work every day in the wards and out-patient departments and a daily formal lecture on the different aspects of this disease. Also beginning on the same date is a month's course in dermatology at the St. John's Hospital for Diseases of the Skin. Demonstrations will be given in the various departments, including laboratory work, and, twice a week, lectures at 5 P.M. From Nov. 10th–22nd St. Mark's Hospital will hold a course in proctology comprising operations, demonstrations, and lectures by members of the staff. A course in gynæcology has been arranged by the Chelsea Hospital for Women from Nov. 21st to Dec. 6th. Clinical demonstrations and lectures will be given in the wards and out-patient department, together with operations and formal lectures. Full particulars of any of the foregoing courses will be sent on application to the Secretary of the Fellowship, 1, Wimpole-street, W.

ROYAL DENTAL HOSPITAL OF LONDON.—A course of eight post-graduate lectures will be delivered in the School of Dental Surgery at the hospital at 5 P.M., between Nov. 19th and Jan. 23rd next. The lectures are open to practitioners, advanced students, and others interested in the subjects. Admission is free, without ticket.

INSTITUTE OF HYGIENE.—At the recent annual general meeting of the Institute at 33–34, Devonshire-street, London, W., the following office-bearers were elected: Sir Thomas Oliver to be President, in succession to the late Sir Malcolm Morris; Prof. John W. H. Eyre to be a Vice-President; Dr. Soltau Fenwick, to be Chairman of the General Council; and Mr. Robert H. Elliot, F.R.C.S., to be Vice-Chairman. Mr. Grant Ramsay, who founded the Institute of Hygiene 21 years ago, retired as Principal of the Institute at the end of last month.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.—A series of rooms specially equipped for electro-therapeutic treatment and massage have been added to the orthopædic department of this hospital. These were formally declared open by Lord Derby on Oct. 24th as part of the commemoration of the jubilee of the hospital. Special features of the department include the apparatus for remedial exercises, baths, and arrangements for ionic medication. It is also intended to form a school for the training of students in electro-therapeutics and medical gymnastics.

UNIVERSITY OF LEEDS.—Dr. F. S. Fowweather has been appointed to the Lectureship in Chemical Pathology recently instituted. Dr. Fowweather graduated with first-class honours in chemistry (first division) at Liverpool University in 1914, gaining the Isaac Roberts scholarship and the John Willox exhibition. After a year's research he was awarded the M.Sc. degree, and he is also a Fellow of the Institute of Chemistry. Later Dr. Fowweather took up the study of medicine and graduated M.B., Ch.B. at Liverpool University in 1922, subsequently obtaining the Diploma in Public Health. He has been in general practice in Ellesmere Port, and has had chemical experience in industry.

CANCER RESEARCH PRIZE.—The committee of the Christie Hospital, Manchester, offers a prize of £300 for cancer research. Candidates must be qualified in medicine or in science cognate to medicine and must submit evidence of original research work bearing on cancer done and projected, which shall in the opinion of the assessors qualify him for the prize. The object of the prize is to support research work already in progress. The assessors will take into consideration promising work which might fail for want of financial help. The successful candidate will be required to send results of his work in a report ready for publication, or to give a lecture in Manchester. The prize will be awarded in two instalments. The competition is open to research workers of any nationality provided that all documents are submitted in the English language. Applications must be sent to the Chairman of the Medical Board, Christie Hospital, Manchester, on or before Dec. 31st, 1924. The decision of the assessors shall be final, and they shall have power to divide or withhold the prize as they think fit.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED OCT. 18TH, 1924.

Notifications.—The following cases of infectious disease were notified during the week, namely:—Small-pox, 80; scarlet fever, 2165; diphtheria, 1091; enteric fever, 104; pneumonia, 698; puerperal fever, 52; cerebro-spinal fever, 5; acute poliomyelitis, 28; acute polio-encephalitis, 12; encephalitis lethargica, 43; continued fever, 2; dysentery, 2; ophthalmia neonatorum, 114. There were no cases of cholera, plague, or typhus fever notified during the week. Nine of the 12 cases of acute polio-encephalitis were notified from Liverpool. The cases of small-pox were reported from the county of Chester, 1 (Dukinfield); Derbyshire, 12 (Derby, 4; Bolsover, 1; Chesterfield, 2; Chesterfield R.D., 3; Clowne, 2); Lancaster, 17 (Ashton-under-Lyne, 11; Hurst, 6); Leicester, 7 (Melton Mowbray); Lincoln, 16 (Gainsborough); Northumberland, 7 (Ashington); Notts, 3 (Mansfield, 2; Mansfield Woodhouse, 1); Warwick, 5 (Nuneaton, 4; Meriden R.D., 1); Yorks N. Riding, 6 (Middlesbrough, 5; Eston, 1); Yorks W. Riding, 6 (Rotherham).

Two corrections are made in the return; the reported totals for encephalitis lethargica and continued fever for the week ended Oct. 11th should have been 44 and 10 respectively. A case of typhus fever shown for the week ended Oct. 4th should have been a case of enteric fever.

Deaths.—In the aggregate of great towns, including London, there were 9 deaths from enteric fever, none from small-pox, 9 from scarlet fever, 29 from diphtheria, 13 from measles, 34 from influenza. In London itself the diphtheria deaths numbered 14 and the deaths from infantile diarrhœa fell to 21.

Medical Diary.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MEETINGS OF SECTIONS.

Tuesday, Nov. 4th.

ORTHOPÆDICS: at 5.30 P.M. (Cases at 5 P.M.)

Cases:

Mr. Paul Bernard Roth: (1) Cases of Torsion of the Tibia. (2) Case of Fracture Dislocation of Head of Radius.

Mr. Muirhead Little: Case of Neglected Injuries to both Knee-joints.

Cases will also be shown by Mr. Bristow and others.

PATHOLOGY: at 8.30 P.M.

Laboratory Meeting at the Inoculation Department, St. Mary's Hospital, Paddington.

Sir Almroth Wright: Some New Technique.

B. J. Collingwood: The Influence of Gravity on the Diffusion of Dissolved Carbon Dioxide.

J. Freeman: Protein Idiopathy Experiments.

R. M. Fry: Demonstration of the Proteolytic Properties of Hæmolytic Streptococci.

L. Colebrook: Enumeration of Bacteria in Blood in Septicæmia.

A. Compton: Demonstration of Blood-urea Estimation by Ambard's Apparatus.

Joan Ross: Staining of Actinomycosis Clubs.

W. D. Newcomb and Joan Ross: Demonstration of Pathological Specimens.

A. Fleming: A Simple Method of Removing Leucocytes from Blood.

Wednesday, Nov. 5th.

SURGERY: at 6 P.M.

Presidential Address:

Mr. H. J. Paterson: The Lure of the New.

Thursday, Nov. 6th.

OBSTETRICS AND GYNÆCOLOGY
EPIDEMIOLOGY AND STATE MEDICINE
SOCIETY OF MEDICAL OFFICERS OF HEALTH
} at 8 P.M.

Joint Discussion on the Notification of Puerperal Sepsis.

The following have promised to speak:—

Dr. R. Dudfield and Dr. W. Butler, Section of Epidemiology and State Medicine; Dr. R. A. Lyster and Dr. J. Cates, Society of Medical Officers of Health; Dr. Herbert Williamson and Dr. J. S. Fairbairn, Section of Obstetrics and Gynæcology.

Friday, Nov. 7th.

LARYNGOLOGY: at 5 P.M. (Cases at 4 P.M.)

Cases will be shown by Mr. C. Gill Carey, Mr. G. W. Dawson, Dr. E. W. Goodall, Sir James Dundas-Grant, Dr. Irwin Moore, Mr. E. Broughton Barnes, and others.

ANÆSTHETICS: at 8.30 P.M.

Paper:

Mr. F. T. G. Hobday: The Selection and Administration of Local and General Anæsthetics for Animals (with epidiascopic illustrations).

COMPARATIVE MEDICINE:

Members of the Section of Comparative Medicine are specially invited to attend this Meeting.

Saturday, Nov. 8th.

OTOLOGY: at 10 A.M. (Cases at 9.15 A.M.)

Presidential Address:

Dr. J. Kerr Love: On Some Neglected Corners of the Otological Field.

Cases will be shown.

ROYAL INSTITUTION, Albemarle-street, W.

MONDAY, Nov. 3rd.—5 P.M., General Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East.

TUESDAY, Nov. 4th.—5 P.M., Dr. F. John Poynton: The Prevention of Acute Rheumatism (Bradshaw Lecture).

THURSDAY.—5 P.M., Sir StClair Thomson, M.D.: Tuberculosis of the Larynx; and its Significance to the Physician (Mitchell Lecture).

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

THURSDAY, Nov. 6th.—5 P.M., Mr. Raymond Johnson: Some Clinical Aspects of Carcinoma of the Breast (Bradshaw Lecture).

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, London, W.

MONDAY, Nov. 3rd, to SATURDAY, Nov. 8th.—WEST LECTURE HALL, Royal Society of Medicine. Lecture arranged by the Fellowship of Medicine and open to all members of the profession. At 5.30 P.M., Monday, the 3rd inst., Mr. W. Ernest Miles: Cancer of the Rectum.—Diseases of Children (Combined Course) at the Paddington Green Children's Hospital, Victoria Hospital, and Children's Clinic. Special Intensive Course, second week.—HAMPSTEAD GENERAL HOSPITAL, Haverstock Hill, N.W. Special Intensive Course in General Medicine and Surgery, second week.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square. Daily demonstrations, pathological demonstrations, and lectures. First week.—LONDON LOCK HOSPITAL, 91, Dean-street, W. 1. Daily clinical work and special lectures on Dermatology, first week.—ST. PETER'S HOSPITAL FOR STONE, &C., Henrietta-street, W.C. Daily clinical work and special lectures on Urology, third week.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.
MONDAY, Nov. 3rd.—12 noon, Mr. Simmonds: Applied Anatomy. 2 P.M., Mr. Addison: Surgical Wards. 2 P.M., Mr. Bishop Harman: Eye Dept.
TUESDAY.—11 A.M., Mr. Endean: Venereal Diseases. 12 noon, Dr. Burrell: Chest Cases. 2 P.M., Mr. Sinclair: Surgical Out-patients.
WEDNESDAY.—11 A.M., Medical Registrar: Medical Wards. 12.15 P.M., Dr. Burnford: Medical Pathology. 2 P.M., Dr. Pernet: Skin Dept.
THURSDAY.—11 A.M., Mr. Simson: Gynæcological Wards. 12 noon, Dr. Scott Pinchin: Heart Diseases. 2 P.M., Mr. MacDonald: Genito-Urinary Dept.
FRIDAY.—11 A.M., Dr. McDougal: Electrical Dept. 12 noon, Surgical Registrar: Surgical Pathology. 2 P.M., Mr. Vlasto: Throat, Nose, and Ear Dept.
SATURDAY.—9.30 A.M., Dr. Burnford: Bacterial Therapy. 10 A.M., Dr. Saunders: Medical Diseases of Children. 10 A.M., Mr. Banks-Davis: Operations on Throat, Nose, and Ear.
Daily, 10 A.M. to 6 P.M., Saturdays, 10 A.M. to 1 P.M., In-patients, Out-patients, Operations, Special Departments.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
TUESDAY, Nov. 4th.—4.30 P.M., Mr. J. Howell Evans: The Pains and Penalties of the Erect Posture.
FRIDAY.—4.30 P.M., Mr. Aubrey Goodwin: Complications of the Menopause.
Daily: Medical and Surgical Clinics and Clinics in the various Special Departments, Surgical Operations, &c.

HOSPITAL FOR SICK CHILDREN, Great Ormond-st., W.C.
THURSDAY, Nov. 6th.—4 P.M., Mr. O. L. Addison: The "Doctor's Dilemma" as seen in Surgical Out-patients.

ST. JOHN'S HOSPITAL, 49, Leicester-square, W.C.
TUESDAY, Nov. 4th.—5 P.M., Dr. Knowsley Sibley: Principles of Treatment (Local).
THURSDAY.—5 P.M., Dr. A. M. H. Gray: Eruptions Due to External Irritants.

MANCHESTER MEDICAL SOCIETY (at the University of Manchester).
WEDNESDAY, Nov. 5th.—4.30 P.M., Discussion on Jaundice to be opened by Dr. F. C. Moore and Prof. A. H. Burgess.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE LECTURES.
TUESDAY, Nov. 4th.—4.15 P.M., Dr. J. Shaw Dunn: Carcinoma of the Kidney.
FRIDAY.—4.15 P.M., Prof. J. S. B. Stopford: The Motor Pathway.

UNIVERSITY OF LIVERPOOL POST-GRADUATE LECTURES. (At 3.30 P.M.)
WEDNESDAY, Nov. 3rd.—(At the Northern Hospital.) Dr. Stopford-Taylor: Common Skin Disorders.
THURSDAY.—(At the Stanley Hospital.) Dr. Wadsworth: Demonstration of Clinical Cases.
FRIDAY.—(At the Royal Infirmary.) Dr. F. Wilson: Modern Treatment of Urethritis.

UNIVERSITY OF SHEFFIELD POST-GRADUATE LECTURES. (At 3.30 P.M.)
TUESDAY, Nov. 4th.—(At the Royal Hospital.) Mr. G. Simpson: Tubercular Kidney.
FRIDAY.—(At the Royal Infirmary.) Dr. Barnes: The Treatment of Diabetes.

ROYAL INSTITUTE OF PUBLIC HEALTH, Russell-square, W.C.
(Course of Lectures on the Health of the Commonwealth.)
WEDNESDAY, Nov. 5th.—4 P.M., Mr. J. R. Kerr: Invalidity from Chronic Joint Disease.

THE PEOPLE'S LEAGUE OF HEALTH. Course of Lectures on the Mind and What We Ought to Know About It. (At the Medical Society of London, 11, Chandos-street, W.)
MONDAY, Nov. 3rd.—6 P.M., Dr. R. G. Rows: Association of Ideas, Recognition, and Memory.

Appointments.

BECKETT, A. J., M.B., Ch.B. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Kidwelly District of the County of Carmarthen.

DUGON, T. H., M.R.C.S., L.R.C.P. Lond., to be an Assistant Director of Medical Service in Nigeria.

SOLLY, E., M.B. Lond., F.R.C.S. Eng., and MILBURN, C. H., M.B., M.S. Durh., to be additional Medical Referees under the Workmen's Compensation Act for the Districts of the Dewsbury and Leeds County Courts.

Manchester Royal Infirmary:—Central Branch: Miss FRANCES A. HOGBEN, M.R.C.S., L.R.C.P., Resident Medical Officer; Miss M. L. P. GOETZE, M.B., B.S., M.R.C.S., L.R.C.P., Assistant Resident Medical Officer.

Royal Eye Hospital, Southwark: HOPE, C. W. M., M.D. Durh., F.R.C.S. Eng., Honorary Rhinologist; LIVINGSTON, A., M.B., Ch.B., M.D.S. Liverp., Honorary Dental Surgeon.

Vacancies.

For further information refer to the advertisement columns.

Aberdeen Royal Mental Hospital.—Third Asst. P. £250.
Bolton County Borough.—Asst. M.O.H. and Sch. M.O. £600.
British Honduras.—Asst. M.O. $2430.
Cape Town University.—Wernher Beit Chair of Pathology.
Chailey, Sussex, Heritage Craft Schools.—H.S. for Orthopædic Surg. Dept. £200.
Cobham, Surrey, Schiff Home of Recovery.—Res. Sec. and Surg. Supt. £600.
Durham County Council Education Committee.—Asst. School M.O. £660.
Edinburgh Royal Mental Hospital.—Res. Asst. P. £350.
Fulham Infirmary, St. Dunstan's-road, Hammersmith, W.—Third A.M.O. £250.
Hampshire County Council.—Dental S. £500.
Ipswich, East Suffolk and Ipswich Hospital.—H.S. £100.
Kensington, Fulham and Chelsea General Hospital, Richmond-road, Earl's Court, S.W.—Sen. and Jun. Res. M.O.'s for six months at rate of £100 and £75 respectively.
Leicester Royal Infirmary.—Two Surgical Dressers, 10*s.* 6*d.* weekly.
Liverpool, Alder Hey Children's Hospital.—Res. Asst. M.O. £200.
London Hospital, E.—First Asst. to one of the four Med. Firms. £400.
Metropolitan Asylums Board Infectious Hospitals Service.—Jun. Asst. M.O.'S. £560.
Metropolitan Asylums Board Mental Hospitals Service.—Two Jun. Asst. M.O.'s. Each £560.
Plymouth County Borough.—M.O.H., &c. £1200.
Queen Charlotte's Maternity Hospital, Marylebone-road, N.W.—Two Asst. Res. M.O.'s for four months at rate of £80. Also Sen. R.M.O. £100.
Queen's Hospital for Children, Hackney-road, E.—Phys. in charge of Skin Dept.
Rochester, St. Bartholomew's Hospital.—Third Res. M.O. £200.
Royal National Orthopædic Hospital, 234, Great Portland-street, W.—Two Surg. Regs. £105.
Royal Naval Medical Service.—Surg. Lieuts. 25*s.* per day.
Royal Northern Hospital, Holloway, N.—H.S., Joint H.P. and S. Each £75. Also Cas. O. £125.
St. Mary's Hospital for Women and Children, Plaistow, E.—Res. M.O. and Asst. Res. M.O. for six months at rate of £175 and £130 respectively.
St. Peter's Hospital for Stone, &c., Henrietta-street, Covent Garden, W.C.—Third Anæsthetist. £25.
Wallasey, Victoria Central Hospital.—Sen. H.S. Also Jun. H.S. £150 and £100 respectively.
West London Hospital, Hammersmith-road, W.—Surg. for Dis. of Women. Dermatologist. Also Hon. Medical Radiologist.
The Chief Inspector of Factories, Home Office, London, S.W., announces the following vacant appointments: Folkestone, Kent; Shilton, Warwick; Ilkeston, Derby.

Births, Marriages, and Deaths.

MARRIAGES.

CORKEY—EWART.—On Oct. 23rd, at Christ Church, Lisburn, I. W. Corkey, M.C., F.R.C.S., of Epsom, Surrey, to Ethel, only daughter of F. W. Ewart, of Derryvolgie, Lisburn.

DICK—ROW.—On Oct. 22nd, at the Garrison Church, Woodcote Park Camp, Epsom, James Hamilton Dick, M.C., M.B., Ch.B., of Bexhill, to Dorothy Charlotte Martin, elder daughter of Lieut.-Colonel and Mrs. Row, Woodcote Park Camp, Epsom.

DODWELL—SÖRENSEN.—On Oct. 25th, at St. Nicholas, Godstone, Howard Branson Dodwell, M.B., Ch.B., M.R.C.S., L.R.C.P., to Dorothea Maclagan Sörensen, younger daughter of Marius A. Sörensen.

HALES—LEE-ELLIOTT.—On Oct. 22nd, at the Parish Church, Blakeney, Dr. Henry Ward Hales, of Lees Lodge, Sheringham, to Charlotte Winifred (Pearl) Lee-Elliott, elder daughter of the Rev. and Mrs. D. L. Lee-Elliott, of Blakeney Rectory.

DEATHS.

ALCINDOR.—On Oct. 25th, at St. Mary's Hospital, John Alcindor, M.B., B.Ch. Edin., aged 51.

HOBBS.—On Oct. 20th, at the War Memorial Hospital, High Wycombe, after an operation, Frederick William Hobbs, M.R.C.S. Eng., L.R.C.P. Lond., aged 42.

STORRS.—On Oct. 21st, at Southwood-avenue, Southbourne, W. H. Townsend Storrs, M.R.C.S., L.R.C.P.

WATTS-SILVESTER.—On Oct. 13th, suddenly, at Sturminster Newton, Dorset, Thomas Henry Evered Watts-Silvester, M.A. Camb., B.Ch., M.B., M.R.C.S., L.R.C.P.

*N.B.—A fee of 7*s.* 6*d.* is charged for the insertion of Notices of Births, Marriages, and Deaths.*

ASSURANCE MEDICAL SOCIETY.—The first meeting of the session will be held at the house of the Medical Society of London on Wednesday, Nov. 5th, when the new President, Dr. G. G. Howitt, will give an address on Life Assurance: its Evolution and Progress.

THE LATE DR. O. H. A. MAGGS, J.P.—Oliver Henry Arthur Maggs, of Haworth, hon. anæsthetist, Victoria Hospital, Keighley, who died in his seventy-third year on Oct. 19th in a private ward at the Keighley Victoria Hospital, had recently retired after practising medicine for nearly a quarter of a century at Haworth and was well known throughout the Keighley district. A student at Charing Cross Hospital he qualified with the L.S.A. in 1892, and for a time was hon. medical officer at Pimlico-road Free Dispensary, London. At Haworth he took an active part in all branches of public life and was for 18 years a member of the urban council. During the war he was honorary radiographer, physician, and anæsthetist at the Keighley War Hospital. He leaves a widow and one son.

Notes, Comments, and Abstracts.

ECONOMY IN DRUGS AND DRESSINGS.*

BY COLONEL L. W. HARRISON, D.S.O., M.B., M.R.C.P. EDIN.,
SPECIAL MEDICAL OFFICER (V.D.), MINISTRY OF HEALTH.

MY interest in the economy of expenditure of hospital materials was first stimulated by the general need for saving which arose during the war, when, in common with the commanding officers of other military hospitals, I set to work to cut down all unnecessary expenditure of hospital materials. I quickly realised that to instil economy in the use of other peoples' goods into the habits of my subordinates was a much more difficult task than I had anticipated, and it was only by constant watchfulness that waste of the kind which any reasonable person would characterise as idiotic was eliminated. Other commanding officers must have experienced the same difficulties judging by the comparison of costs in different military hospitals. Such an experience was a good preparation for the directorship of the V.D. Department at St. Thomas's Hospital, for which it was clear that the L.C.C. grant, though large, would leave no margin for waste.

Experience at St. Thomas's Hospital V.D. Centre.

Soon after taking over this department I noticed that for every patient suffering from a certain disease a certain mixture was prescribed automatically. The main reason for the prescription was a fear that the patients would think they were not being properly looked after if they received nothing to swallow. I had no objection to a *placebo*, but I suspected that this particular mixture would prove expensive when repeated many thousands of times. A consultation with Mr. Jennings, the chief pharmaceutist of the hospital, confirmed my suspicions, the price of the mixture proving to be over 8*d.* for the usual supply given to a patient. With very little trouble we worked out a prescription with the same therapeutic properties at a quarter the price, and I then had a little talk with my assistants on the subject. I said, first, that the hospital received such and such a grant for my department, so that the cost of any waste would be borne by the hospital, not by some public authority with a bottomless purse. That, of course, a patient must have what he or she really needed, but that, as they knew, many patients required no medicine, while for most others the cheaper prescription which the pharmaceutist and I had evolved, would work just as well as the more expensive which was then being prescribed as routine. My colleagues accepted my suggestions in the spirit I had hoped for, and this was the beginning of numerous little economies which have made this centre the cheapest in the matter of drugs (other than arsenobenzol) and dressings of all such centres in the country. For the patient who won't be happy till he gets a bottle of medicine though he needs nothing, Mr. Jennings suggested two mixtures which cost from one-eighth to a fourteenth the price of our first essay in economy.

Economy in Gloves and Swabs.

The expenditure of rubber gloves in a venereal diseases department is naturally heavy, as the workers in it must wear gloves for their own protection against accidental infection. I suggested that some reduction might be effected by repairing small tears. At first it was thought that repaired gloves would not prove to be safe, but, without further urging on my part, Sister Hutton, who is in charge of the nursing in the section for the treatment of females, took up the suggestion with such good effect that in 1921, when the whole department was working on a daily 8 A.M. to 10 P.M. service, and the attendances were 113,341 the expenditure of gloves was 452 pairs, as contrasted with 1920 when the expenditure of gloves was 611 pairs, though for most of the year only the section for males was open all day and the attendances were over 37,000 less. In the following year, 1922, only 442 pairs were used, though the attendances were 149,682.

Large numbers of wool and gauze swabs are used in the department, particularly for application to the bend of the elbow after venepuncture in the administration of arsenobenzol preparations. The size of each swab appeared to be rather larger than necessary and the amount of wool in each was reduced in 1921 to about two-thirds. It is impossible to state the effect in the amount of wool expended in swabs, as the figures are not separable from the total expenditure on this and other accounts, including ordinary dressings and supplies of wool to the laboratory, but the expenditure of wool in 1922 was £10 less (442 lb.) than in 1921, though the attendances in 1922 were 37,000 more than in 1921.

The result of these economies in drugs and dressings, each of them small enough in itself, is that the cost of drugs and dressings for the past two years has been 1·17*d.* and 1·25*d.* respectively per attendance, or totals of £726 to £654. It may be added that, under the admirable system of accounting at St. Thomas's Hospital, it is possible to arrive at a very close figure of the cost of each section of the hospital. All material for each department is supplied only on requisitions, which are priced and the amount debited against the department. Such a system is a great incentive to economy.

Examples from other Centres.

The experience has proved useful in my work for the Ministry of Health. When the demand for national economy resulted in the recommendations of the Geddes Committee, I feared that the stoppage of all additional expenditure on the V.D. scheme would be the ruin of my hopes of reorganising many treatment centres on efficient lines. I set to work, however, to discover money for such reorganisation as I might think necessary, by pointing out where money was being wasted, and have found a very profitable field in drugs and dressings. Often I have met with surprise that what was considered to be such a trifling matter should be thought worthy of my attention, but I have pointed out to some medical officers that, if the drugs and dressings bill in my own department were on the same scale as theirs, it would amount to over £8000 instead of an actual £726 or less. To cite a few examples :—

1. A hospital at which a small centre had been established had contracted to supply the drugs and dressings for £109 a year. The size of the centre can be gauged from the fact that this small sum worked out at 4*d.* per attendance. One year the hospital applied for a further payment of £260, by which sum they had exceeded their contract, raising the cost of drugs (other than arsenobenzol) and dressings to 1*s.* 2*d.* per attendance. Inquiry into the details elicited that no less than £117 a year was being spent on bandages. I made a guess at the cause of expenditure and offered the opinion that it is not usually necessary to bandage a patient's arm after an intravenous injection. This elicited the retort that it would be dangerous to allow a patient's shirt to come into contact with such a wound. I found later that the venepuncture wound was dressed with at least six layers of cyanide gauze, followed by a large piece of wool and several turns of bandage. Yet no dressing was applied to the much deeper wound in the much less cleanly area of the buttock which was made by way of giving an intramuscular injection to the same patient.

2. In another centre it was discovered, after the failure of the hospital to find any wastage, that in a stock mixture of iodide of potassium was another ingredient with which the iodide was really incompatible, the result being a very inelegant mixture. The cost of the effective ingredient, the iodide of potassium, was 6*d.*, that of the incompatible was 1*s.* 4*d.* The prescription had been in the hospital's pharmacopœia for many years, and the medical officer who had prescribed mist. pot. iodid. to the extent of several thousands of bottles, learnt of the presence of the incompatible and costly ingredient for the first time at a conference between the hospital and the health authority, at which I assisted.

3. In another hospital with a comparatively small turnover and a high drug bill, I found that the expenditure on a proprietary medicated pessary was £105 a year, or 8*d.* per attendance, yet the medical officer was quite ignorant of the cost, and could not name any special advantage of this particular pessary over a substitute I suggested costing a tenth the amount.

Few medical and surgical officers realise the price of the drugs and dressings which they prescribe and often use so lavishly. If they did, a little appeal on the part of the hospitals which they serve would cause them to effect such economies as would be equivalent to very substantial donations to the hospitals' funds.

* Abridged from the Fifth Annual Report of the Director of Hospital Services, Joint Red Cross Council.

HUMANE SLAUGHTERING OF ANIMALS.

GIVING the third Benjamin Ward Richardson Memorial Lecture, under the auspices of the Model Abattoir Society, on Oct. 23rd, Dr. Chalmers Mitchell, F.R.S., secretary of the Zoological Society of London, said that he proposed to present some evidence drawn from the Zoological Gardens as to the need of humanity and hygiene in the slaughtering of animals and the preparation of their flesh as food, and to urge that the requisite conditions could be best secured in model public abattoirs. Examination of the intestines of mammals and birds showed that the more primitive types in most classes were adapted to an omnivorous diet and that the purely carnivorous and the purely vegetarian habits were more specialised. Man, although the most highly specialised

in brain, was more primitive in some other organs, including the intestines, and was more adapted to an omnivorous diet than most of his monkey relations. Until human beings modified their insides and their habits, a meat-supply would, he thought, be required.

At the Zoological Gardens, Dr. Mitchell went on to say, they had to provide meat for carnivorous and omnivorous mammals and birds. The animals chiefly used for this supply were horses and goats and these were killed in a modern, hygienic abattoir. The rifle was used, and although on an average three horses were required in two days, he knew in the last 20 years of only two cases where a second shot had been required. They had tried "humane killers," but at least for horses had found no advantage in their use. He had no personal experience in observing the use of the pole-axe or in the Jewish ritual method, but had examined evidence of experts very carefully. He was quite certain that all methods of electrocution known at present required too elaborate a preparation, upsetting to the animals, and dangerous to the staff, to be recommended. He had come to the conclusion that there was little or nothing to choose between the rifle and the humane killer, the pole-axe or the knife, skilfully used under proper conditions, as the instruments of actual death. But there were many opportunities for carelessness, ignorance, or inhumanity to inflict unnecessary suffering in the preliminaries to the final act. In his opinion these opportunities were least in the case of the rifle, relatively small with the humane killer, definite and probably nearly equal in the case of the pole-axe and the knife. If they were to be reduced to the absolute minimum, this could be done only in a large public abattoir with expert supervision.

In his opinion and experience animals had no presentiment of death, and even the fresh blood and warm offal of their fellows conveyed no message of fear to their consciousness. But they were readily thrown into panic by being driven into unfamiliar places and touched in unfamiliar ways by unfamiliar hands. He urged that every abattoir should have attached to it stables or byres of a kind to which they were accustomed, and that they should be kept in these for at least some hours before being slaughtered, and be tended and finally led out by men familiar with the handling of living animals. There would then be the least chance of panic and therefore of accident in submitting them to the weapon employed.

HYDROMINERAL STATIONS IN ITALY.

THE Nord-Sud medical tour to the principal Italian spas, organised by the Italian State Tourist Office (E.N.I.T.) for foreign doctors, took place between Sept. 18th and Oct. 3rd. It was attended by over 50 medical men from England, France, Belgium, Holland, Switzerland, Germany, Poland, Hungary, Denmark, Sweden, and Finland. The tour, starting in Milan and ending in Naples, was made in a special first-class train, and was conducted by Prof. Guido Ruata, M.D., general secretary of the E.N.I.T. The participants were divided into language groups; French, English, and German, and every group was provided with a doctor interpreter. At each spa a graphic lecture was given by a medical authority of the resort, and the doctors were provided with the text of the conference printed in French, English, and German. The lecturers were: Dr. de Alessandri, medical superintendent, at Acqui; Prof. Devuto, of the Milan University, at S. Pellegrino; Dr. Gazzoletti, medical superintendent, at Levico; Prof. Viola, of the Bologna University, at Roncegno; Prof. Zoia, of the Pavia University, at Salsomaggiore; Senator Prof. Queirolo, of the Pisa University, at Montecatini; Prof. Ascoli, of Rome University, and Prof. Sabatini, medical superintendent, at Chianciano; Prof. Nazari, medical superintendent, at Fiuggi; Dr. di Tommasi, medical superintendent, at Agnano. The lectures were followed by inspection of the waters, of the establishments and other interesting points at each resort, under the guidance of the resident doctors, helped by the interpreting doctors. Everywhere the visitors were cordially welcomed. In Milan they were received officially at the palace of the Italian Touring Club by the president of the club, and at the Capitol in Rome and at the Municipal Palace in Naples by the mayors of these cities. The Italian State Tourist Office is organising a second tour for foreign doctors next year, which will comprise some of the most important Italian climatic stations in addition to the spas.

BATH MUSTARD.

WE have received from Messrs. Keen, Robinson and Co., Ltd., of Carrow Works, Norwich, a specimen of the new form of packing for this pleasant and useful addition to the bath. The mustard is now put up in a tin canister with a hinged lid, and the decorative design on the enamelled exterior makes the mustard container an elegant ornament for the bath-room. The price is 2*s.* 6*d.* per canister.

MIRROR-WRITING IN AN ADULT.

To the Editor of THE LANCET.

SIR,—Referring to Dr. V. Pendred's letter on this subject in your issue of Sept. 27th (p. 684) I know a young lady of over 30 years who can mirror-write with either hand. She is naturally left-handed and writes more easily with that hand for her mirror-writing and more easily with her right for normal writing. She can write normally with her left hand also. She can also write simultaneously with the two hands. I enclose a copy of her handicraft. The four types of writing are remarkably similar.

I am, Sir, yours faithfully,

Oct. 18th, 1924. M.B.

MIRROR-WRITING AND LEFT-HANDEDNESS.

To the Editor of THE LANCET.

SIR,—I should like to record another instance of the association between mirror-writing and left-handedness. It is the case of a little boy almost 8 years old. He has always been left-handed. As soon as he began to learn to write it was noticed that he was forming certain letters in the reverse direction—that is, from right to left (ꟻ. ꟻ), which is mirror-writing. It is not my object at the present time to offer any speculations upon the meaning of the association between mirror-writing and left-handedness. I merely wish to record one more case of the concurrence of these two peculiarities, the source of which must ultimately consist in some kind of atypical cerebration.

I am, Sir, yours faithfully,

Dane Hill, Sussex, Oct. 20th, 1924. D. FRASER HARRIS.

MANCHESTER LOCAL VOLUNTARY HOSPITALS COMMITTEE.

THE report just issued emphasises the vast extent of the work done by these institutions and the need there is for greater public support. In the 17 local hospitals last year there were 194,093 new out-patients and 28,146 new in-patients. The total ordinary income was £230,226 and the expenditure £274,504, leaving a net deficit for the year of £38,278. The committee is of opinion that the voluntary system should be maintained and is worth saving, but it is felt that only the public can adequately answer the question by a generous response to the appeal for funds. The committee has come to the conclusion that a very large measure of support has failed to accrue by reason of the lack of centralised effort—there is not sufficient cohesion in the efforts at present being made. Centralised efforts have been successful in other towns to keep the local hospitals out of want, and success has crowned such efforts. The Voluntary Hospital Committee is therefore of the very strong opinion that such an object should be attempted in Manchester and Salford with a view to stimulating the existing agencies, and also to ensure that all avenues of support are fully explored.

A WHIFF OF OLD TIMES.

THE contents of a commonplace book compiled for medical men may be useful for bedside reading. Dr. John Wishart has collected a hundred extracts[1] from literature prior to 1850 of mixed quality. Occasionally we come upon an extract which has a good flavour, such, for instance, as No. 51 from Coghan's "Haven of Health," 1636.

"Now what Cheese is well made or otherwise may partly be perceived by this old Latine verse:—

Non nix, non Argos, Mathusalem, Magdalanaene,
Esau, non Lazarus, caseus ille bonus.

That is to say, Cheese should not be white as snow is, nor full of eyes as Argos was, nor olde as Mathusalem was, nor full of whey or weeping as Marie Magdalen was, nor rough as Esau was, nor full of spots as Lazarus was. Banburie Cheese shall go for my money, for therein (if it be of the best sort) you shall neither taste the renet nor the salt, which be two special properties of good Cheese."

Another interesting extract is No. 10, being an account of a case of precocious puberty in a boy who died at the age of 7 "with all the signs of extreme old age and as if the months he had lived had been years." This is taken from the *Gentleman's Magazine* for December, 1734. The child must have been the original of Gilbert's "enfeebled old dotard of five."

[1] A Whiff of Old Times; or 100 Extracts from Literature prior to 1850, for Medical Practitioners and Others. Collected by John Wishart, M.D. J. Wright and Sons. 3*s.*

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